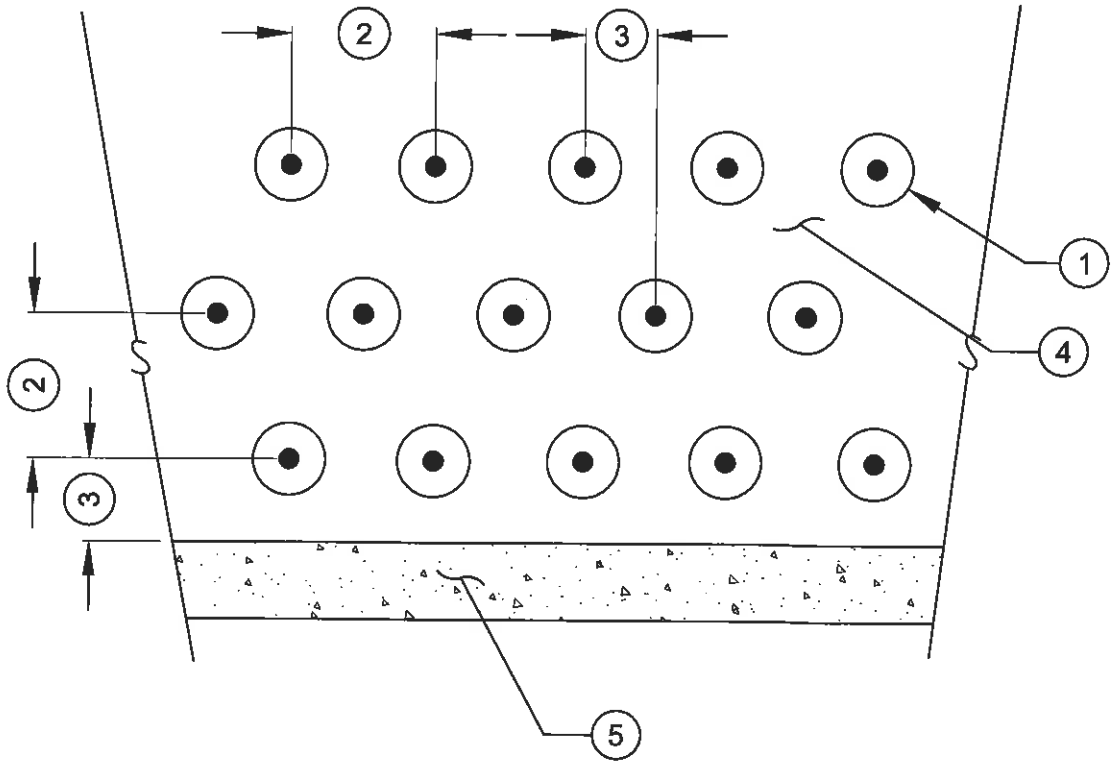
LANDSCAPE STANDARD DETAILS



PLAN VIEW

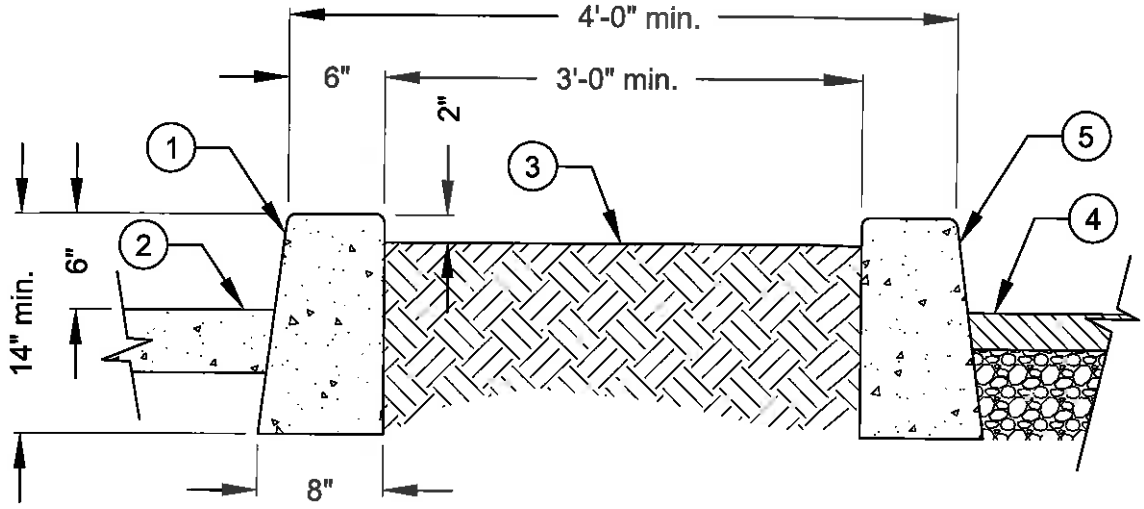
1. Groundcover (set crown @ original height)
2. On- center plant spacing (per plan)
3. 1/2 of on-center spacing (per plan)
4. Shrub or ground cover planting area
5. Curb, hardscape, or other improvement (where occurs per plan)

PLANTING TABLET TABLE	
Size of plant	No. of tablets
Flat Plant	(1) - 7 oz
1 gallon	2-3
Planting tablets shall be gro-power or equal	

Note:
Erosion control mesh (City approved) shall be installed on all slopes 2:1 or greater.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	GROUND COVER DETAIL	L-01
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1



1. Concrete planter curb, 2800 psi @ 28 days (min.)
2. Finish grade at sidewalk or parking lot
3. Finish grade includes 3" of mulch
4. Street paving on base (depth per Engineer's requirements)
5. Concrete curb "A" (City standard drawing S-09)

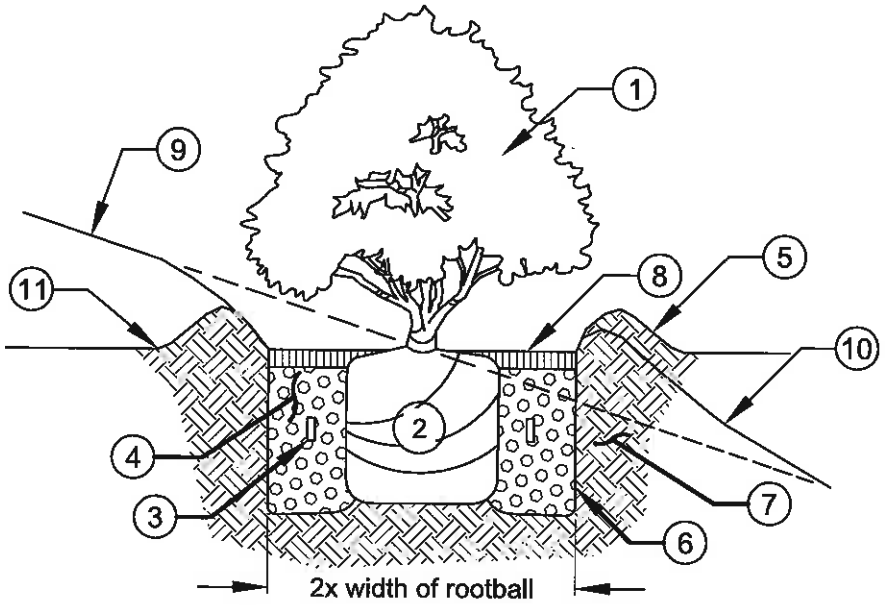
Notes:

1. Provide planter strip with concrete curb "A" along the entire property adjacent to a dedicated street, excluding drive approaches.
2. Omit concrete planter curb when turf is planted in strip. Finish grade at turf shall be flush with sidewalk.

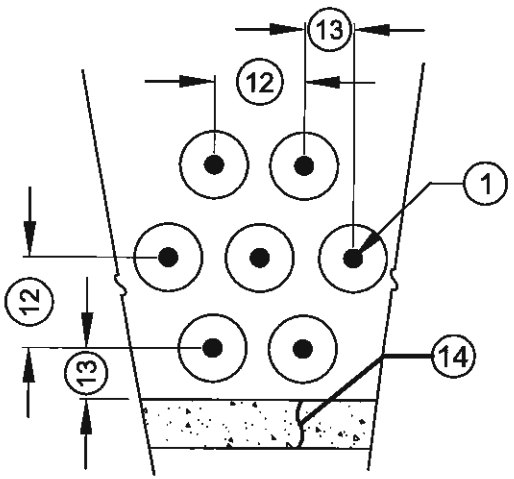
CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	PLANTER STRIP AT STREET MEDIANS	L-02
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1



SECTION VIEW



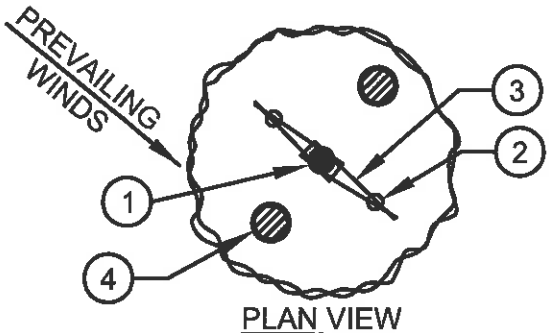
TRIANGULAR SPACING PLAN

1. Shrub, see plan for spacing (set crown at original height)
2. Rootball - set on undisturbed soil
3. Planting tablets (typ.) (see table for quantity)
4. Amended backfill: 2/3 site soil + 1/3 organic backfill mixture (forest humus or equal) + amendments per soil analysis
5. Soil berm (on the downhill side of plant pit if on slope)
6. Plant pit - rougher sides
7. Undisturbed soil
8. Bark mulch
9. Slope @ original grade
10. Slope @ proposed grade
11. Finish grade includes 3" of mulch
12. On- center plant spacing (per plan)
13. 1/2 of on-center spacing (per plan)
14. Curb, hardscape, or other improvement (where occurs on plan)

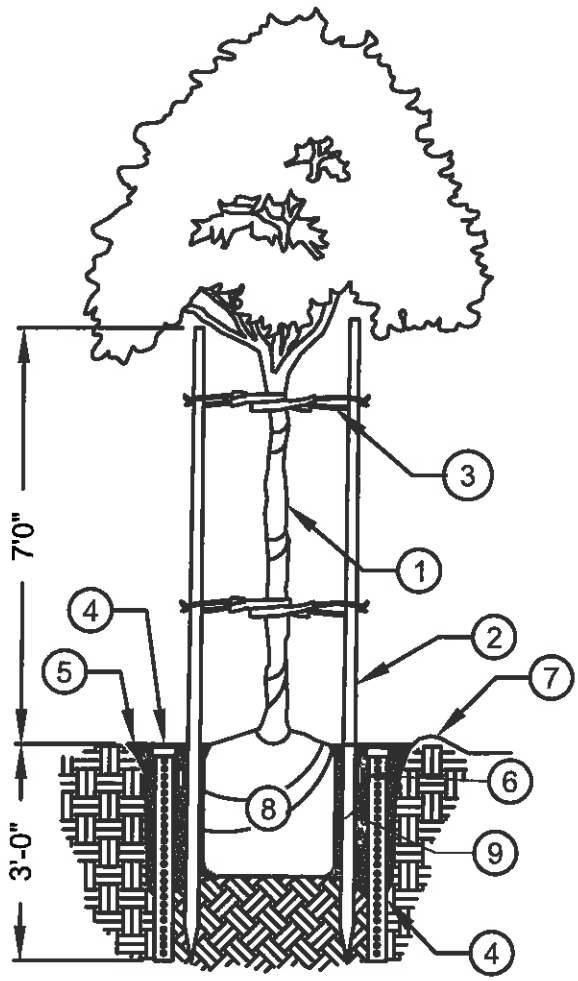
PLANTING TABLET TABLE	
Size of plant	No. of tablets
1 GALLON	2-3
3 GALLON	3-6
5 GALLON	6-9
7 GALLON	8-10
10 GALLON	10-12
15 GALLON	12-15
Planting tablets shall be gro-power or equal	

Note:
1. Erosion control matting or jute mesh (city approved) shall be installed on all slopes 2:1 or greater.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS
SHRUB PLANTING DETAIL
L-03
SHEET 1 0F 1
APPROVED BY: BRIAN GENGLER, CITY ENGINEER
4/27/2016
NOT TO SCALE



PLAN VIEW



SECTION VIEW

1. Tree trunk
2. 3" x10' lodge pole pine stakes with green preservative stain
3. (2) 16" v.i.t. twist braces; screw to stakes with 1" inch dry wall screws.
4. 4" dia. x 36"l. perforated pvc pipe w/ pvc cap, fill with 3/4" dia. pea gravel, (install 90 deg. from stakes) top of pipe shall be flush with grade in basin
5. Bark mulch (forest humus); up to but not covering crown
6. Planting tablets (see table)
7. Soil berm
8. Rootball
9. Amended backfill: site soil + 1/3 organic backfill mixture (forest humus or equal) + amendments per soil analyses

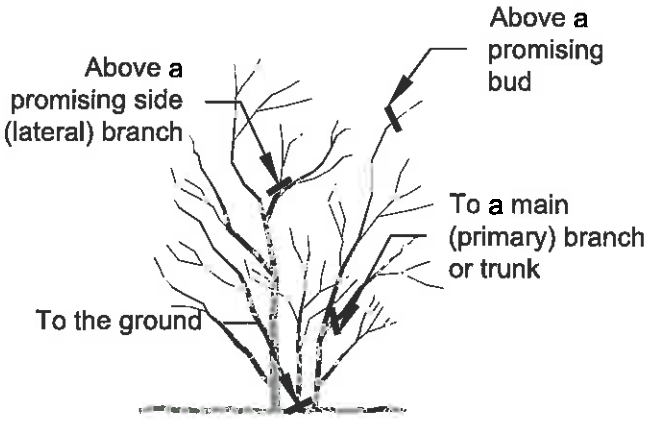
PLANTING TABLET TABLE	
Size of plant	No. of tablets
1 GALLON	2-3
3 GALLON	3-6
5 GALLON	6-9
7 GALLON	8-10
10 GALLON	10-12
15 GALLON	12-15
24" BOX	18-21
36" BOX	21-24
Planting tablets shall be gro- power or equal	

Notes:

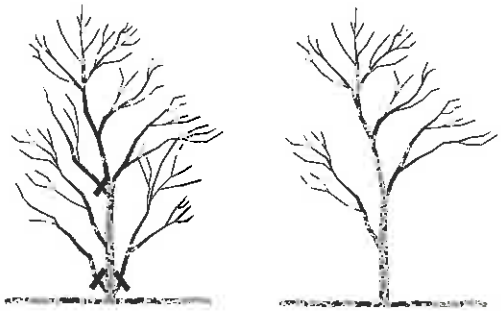
1. Root barriers (2' deep x twice the rootball diameter) shall be required where a tree is 5' or less from any hardscape or infrastructure.
2. Tree shall not be planted in LMAD's 9' wide or less
3. Cut turf away from trunk 4" in diameter. Slope soil away from rootball in all directions a maximum of 4%
4. 24" is the minimum distance of irrigation bubbler to the tree trunk.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	TREE PLANTING DETAIL	L-04
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



PRUNING TO SHAPE



THINNING (BEFORE) THINNING (AFTER)

HEADING BACK (BEFORE) HEADING BACK (AFTER)

HEADING BACK MAY BE DONE BETWEEN DECEMBER THROUGH FEBRUARY AND INCLUDE:

1. Cut out dead or broken branches & limbs
2. Cut off sucker growth.
3. Cut out crossing or inward growing branches.
4. Cut up to 25% of growth (to upward-facing bud)

PRUNING TO SHAPE:

Pruning to shape is a concept in which the artistic side of pruning determines your concept of what the right shape of a plant should be. Every plant has a "natural" shape where the growth tends to conform to a natural pattern. Observe what a plant's natural shape is, and then prune the plant in a manner that will allow the natural form to continue to develop. Remove excess growth that obscures the basic pattern or any errant growth that departs from the natural form.

THINNING:

Thinning is the extreme of heading back, instead of removing parts of stems, entire stems, limbs, or branches are removed. Reasons for thinning are essentially the same as for heading back. It opens up a plant by simplifying its structure, removing old and unproductive growth, or limbs that are growing in directions that detract from the plant's attractiveness. Rose pruning, removing entire canes to the plant's base.

HEADING BACK:

Heading back (also called cutting back), uses the same growth principle as pinching, that growth elongates in one direction until it is stopped. The difference is that in heading back, lengths of stem already grown are cut off rather than removing growth before it forms stems. In heading back, stems are cut down to side branches or lateral buds that will grow in the direction desired. The annual ritual of rose pruning probably is the most familiar example of heading back. During heading back, decisions are made regarding which growth to remove and to leave, thereby controlling and directing a plant's growth.

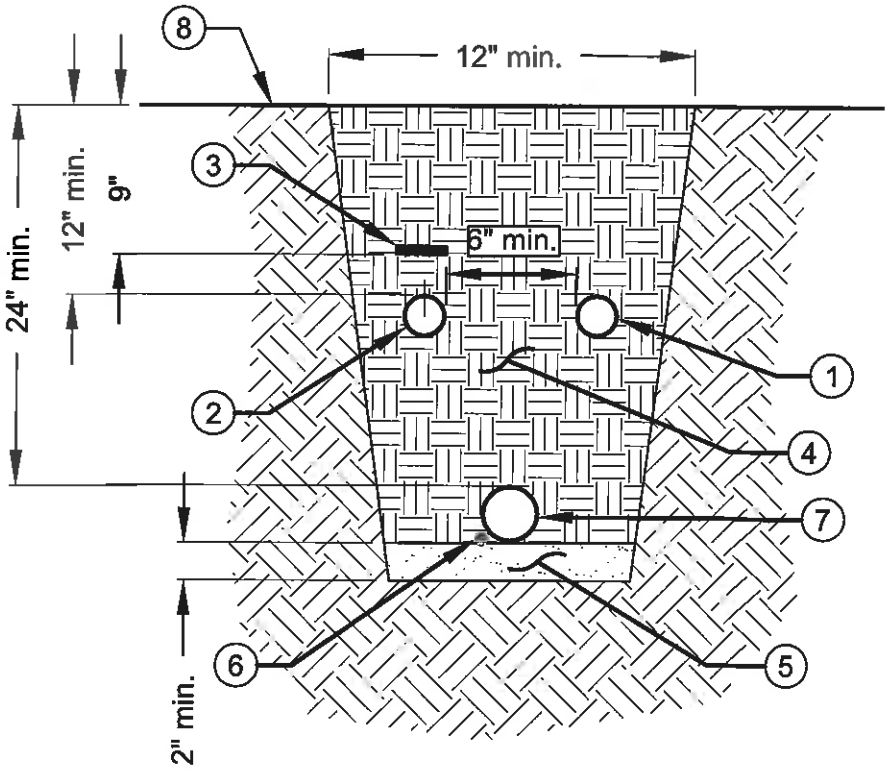
HEADING BACK MAY BE DONE:

1. To remove weak or unproductive wood.
2. To encourage growth in a desired direction.
3. To prevent growth from continuing in the undesirable direction.
4. To stimulate flower or fruit production by encouraging growth of wood that will produce.
5. To prevent wind or snow damage.
6. To revitalize an old plant.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	TREE PRUNING (DEC. TO FEB.)	L-05
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



1. Non-pressure lateral pipe
2. EMT conduit or equal for 110v wires
3. Trench marker - continuos plastic tape labeled "caution- electrical" directly above conduit
4. Backfill
5. Sand or approved bedding material
6. Irrigation controller wire bundle (24v), provide 10' -15' coil at every turn and valve
7. Mainline pressure pipe
8. Finish grade includes 3" of mulch

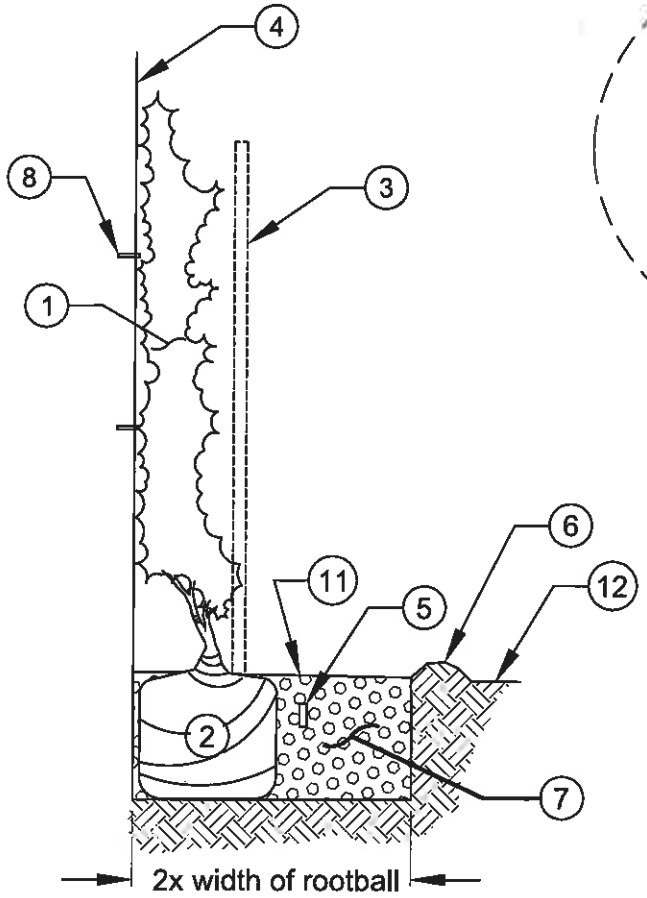
Notes:

1. Two or more laterals (r main lines) in the same trench shall be placed side by side with 6" min. backfill between pipes both horizontally and vertically.
2. Sleeve all laterals, mainline, and electrical under concrete and asphalt surfaces
3. All measurements shall be from finish grade to top of pipe.

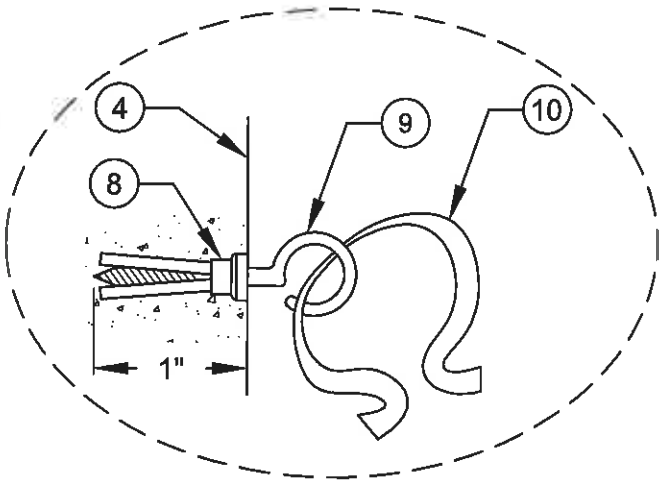
CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	TRENCHING REQUIREMENTS	L-06
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



SECTION VIEW



WALL ATTACHMENT DETAIL

PLANTING TABLET TABLE	
Size of plant	No. of tablets
1 GALLON	2-3
3 GALLON	3-6
5 GALLON	6-9
7 GALLON	8-10
10 GALLON	10-12
15 GALLON	12-15
Planting tablets shall be gro- power or equal	

(1) Vine (espalier on wall)

(2) Rootball (set tight to ftgs). Remove excess concrete to accommodate planting hole

(3) Nursery stake (do not damage plant or rootball). Attach vine to fence, wall, overhead, or other adjacent vertical surface.

(4) Wall, fence or post

(5) Planting tablets (see table for quantity)

(6) 4" watering berm

(7) Amended backfill: site soil + 1/3 organic backfill mixture (forest humus or equal) + amendments per soil analysis.

(8) Lead expansion anchor (as needed)

(9) 3/16" stainless steel eye-screw

(10) Heavy duty green plastic ribbon tie, 2 ties (min.) per vine (length as required)

(11) Bark mulch (2" deep)

(12) Finish grade includes 3" of mulch

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016

VINE PLANTING DETAIL

L-07

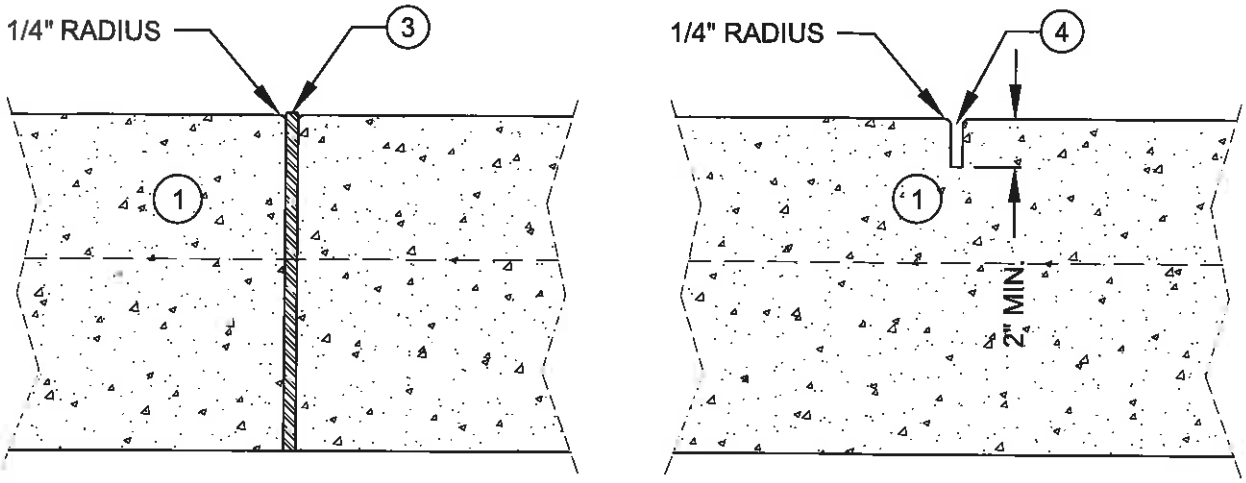
NOT TO SCALE

APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler

SHEET 1 OF 1

HARDSCAPE STANDARD DETAILS

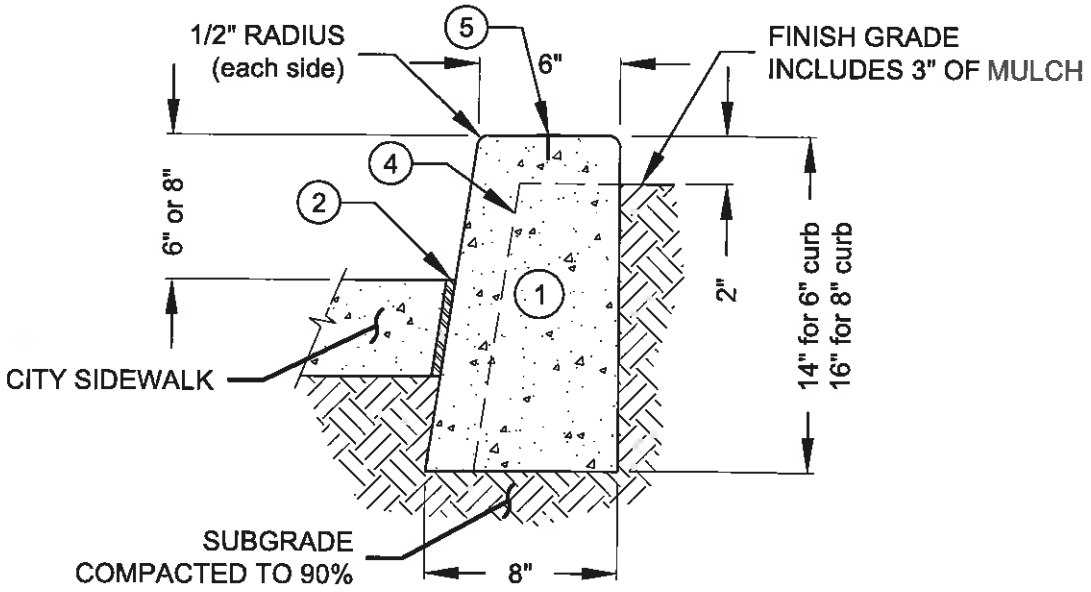
CITY OF VICTORVILLE
INCORPORATED SEPT. 21, 1962
HOME OF THE SAN BERNARDINO COUNTY FAIR
CALIFORNIA



EXPANSION JOINT

CURB FACE VIEW

WEEKENED PLANE JOINT



CROSS SECTION VIEW

(1) Planter curb constructed of cement concrete containing not less than 550 lbs. of type II portland cement per cubic yard, not less than 4% air entrainment, and 1" max. aggregate grading (min. 2800 psi @ 28 days). Medium broom finish on all exposed surfaces. Concrete to be cured with white pimented curing compound.

(2) Expansion joint with 3/16" fiber material where curb abuts any concrete improvement.

(3) Weekened plane loints 2" deep at 10' intervals

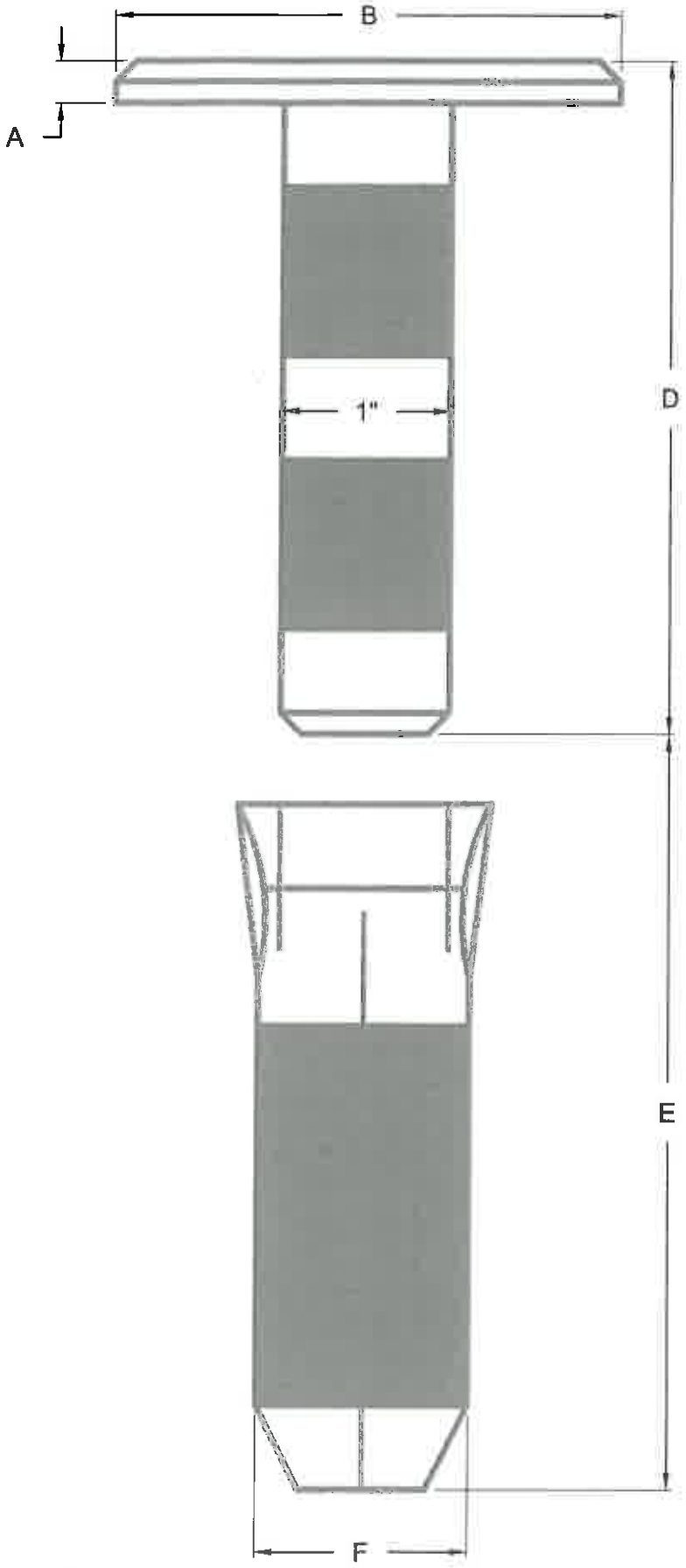
(4) 1/2" wide expansion joint filled with plastic type filler at 60' intervals

(5) Location of utility marker per detail H-02

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	"A" CURB DETAIL	H-01
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1

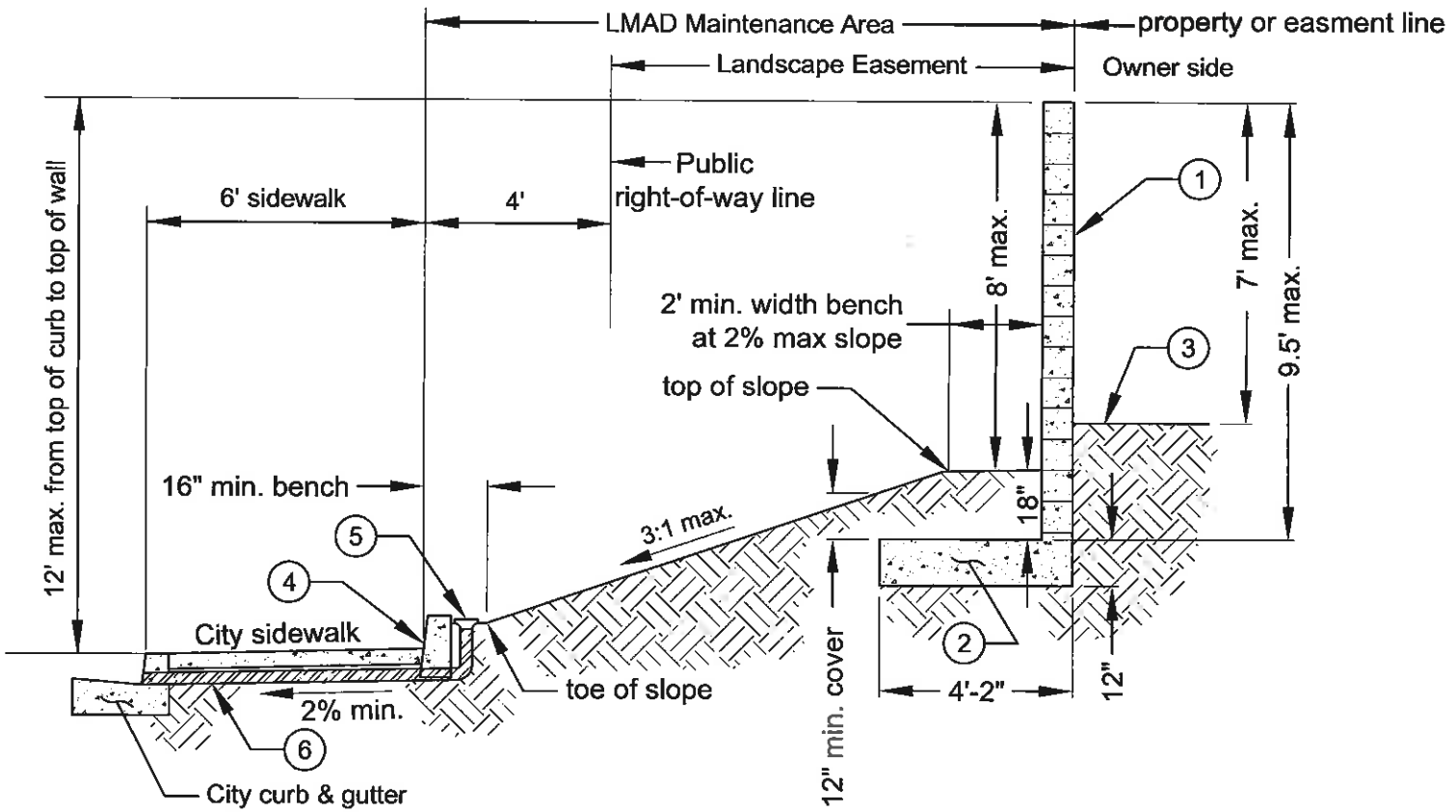


A = 1/8" (3 mm)
B = 1 5/32" (30 mm)
C = 21/64" (8 mm)
D = 1 11/16" (43 mm)
E = 1 7/16" (37 mm)
F = 29/64" (12 mm)

NOTE: The location of the utility marker is to be as shown on standard H-01 and/or as directed by the City Engineer.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	BP UTILITY MARKER WITH ANCHORING PLUG	H-02
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1



Note: All wall surface below ground shall be coated with waterproofing sealant - meet or exceed A.S.T.M. D449 type I

1. 8" split face block wall per LMAD Detail H-04. All cells grout filled. Min. 6' high from finish grade of the higher side (owner or easement); Max. 8' high on street side; Max. 7' on property owner side.
2. Footing per LMAD Standard Wall Detail H-04.
3. Finish surface per precise grading plans.
4. 6" curb per city standard drawing No. H-01 and S- 09
5. Drain grate located within slope bench area, top of grate set 1" below top of curb or wall, (unless otherwise directed by City inspector). Finish grade to be 2" below curb (Finish grade inlcudes 3" of mulch).
6. 3" Ø - sch. 40 PVC rigid drain at 2% grade min. every 100'- 150' max. (though curb as required)

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

LMAD AREA SLOPE & WALL LAYOUT

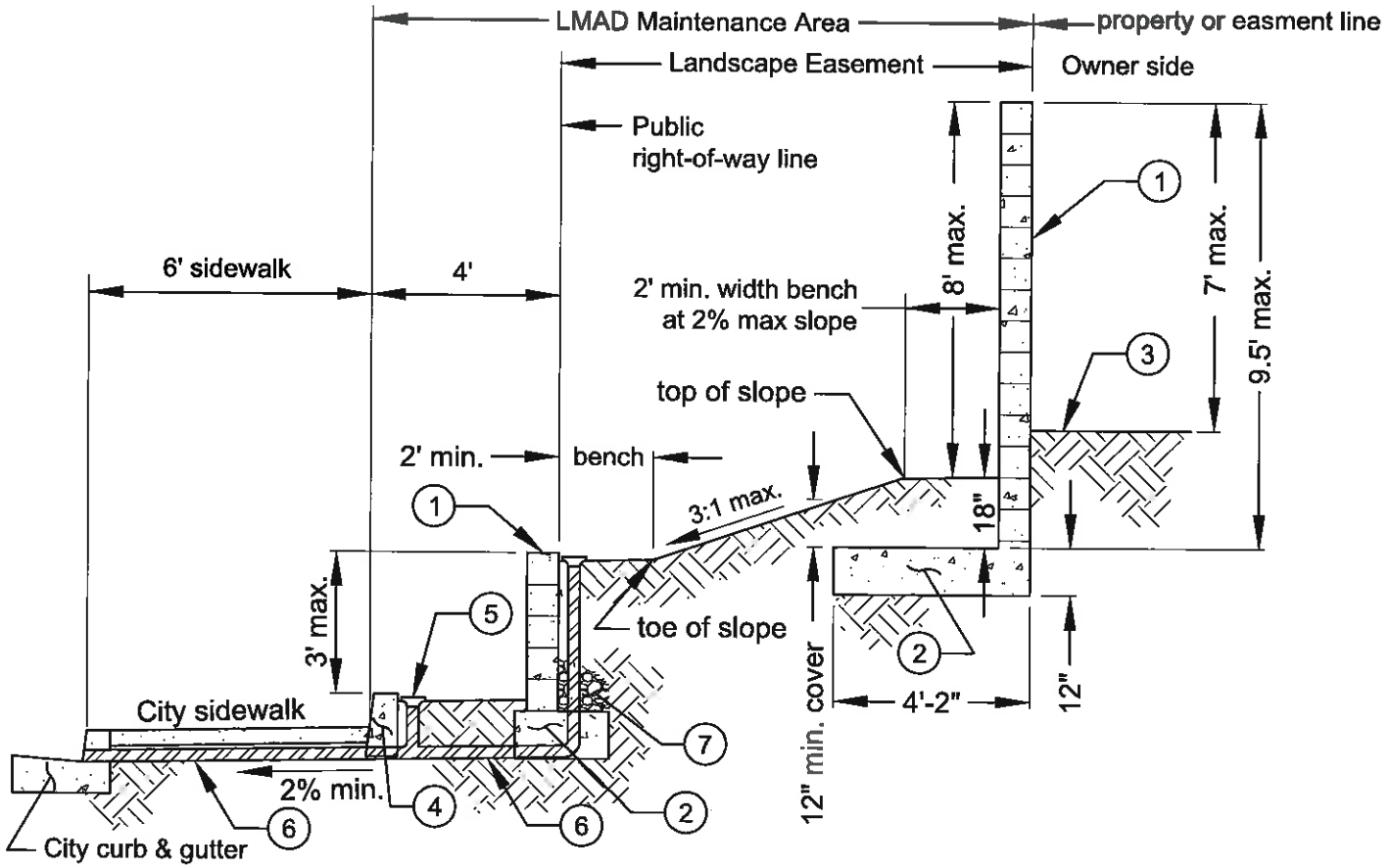
APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler

4/27/2016

NOT TO SCALE

H-03

SHEET 1 OF 1



Note: All wall surface below ground shall be coated with waterproofing sealant - meet or exceed A.S.T.M. D449 type I

1. 8" split face block wall per LMAD Detail H-04. All cells grout filled. Min. 6' high from finish grade of the higher side (owner or easement); Max. 8' high on street side; Max. 7' on property owner side.
2. Footing per LMAD Standard Wall Detail H-04.
3. Finish surface per precise grading plans.
4. 6" curb per city standard drawing No. H-01 and S- 09
5. Drain grate located within slope bench area, top of grate set 1" below top of curb or wall, (unless otherwise directed by City inspector). Finish grade to be 2" below curb (Finish grade inlcudes 3" of mulch).
6. 3" Ø - sch. 40 PVC rigid drain at 2% grade min. every 100'- 150' max. (though curb and footing as required)
7. Open head joints or 2" weep holes, with 1 cu. ft. pea gravel behind wall at 20' intervals on center.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

LMAD AREA SLOPE & WALL LAYOUT (VARIANCE)

H-04

SHEET 1 OF 1

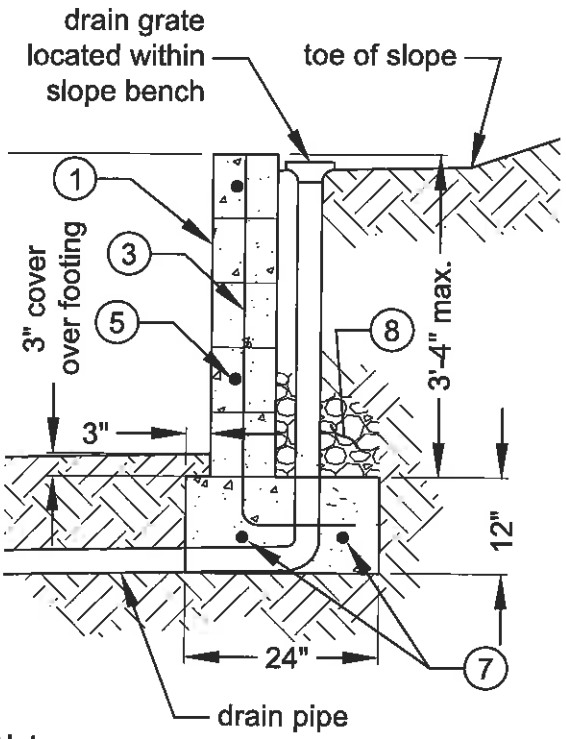
APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler

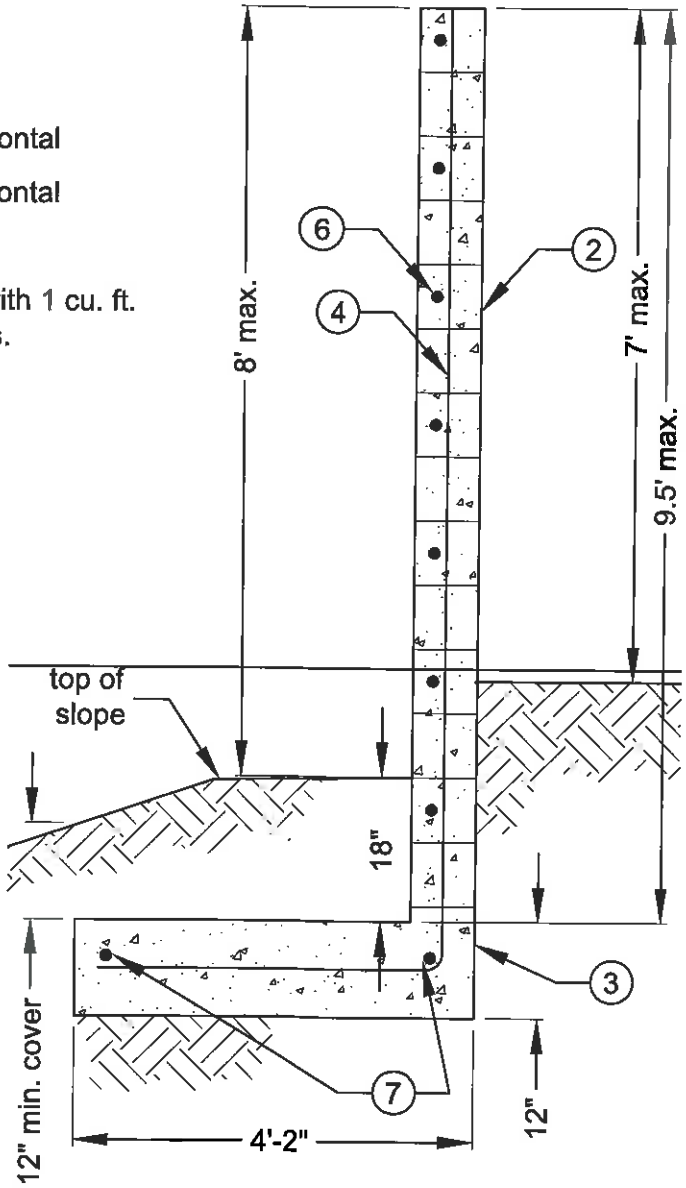
4/27/2016

NOT TO SCALE

1. 6" or 8" CMU, solid grout in all cells
2. 8" CMU, solid grout in all cells
3. #4 vertical and toe rebar @ 32" o.c.
4. #4 vertical and toe rebar @ 16" o.c.
5. #4 bond beam rebars @ 24" oc horizontal
6. #4 bond beam rebars @ 16" oc horizontal
7. #4 continuous rebar through footing.
8. Open head joints or 2" weep holes, with 1 cu. ft. pea gravel behind wall at 20' intervals.
9. concrete footing 2500 psi min.

All rebar splices shall be lapped 20" min.





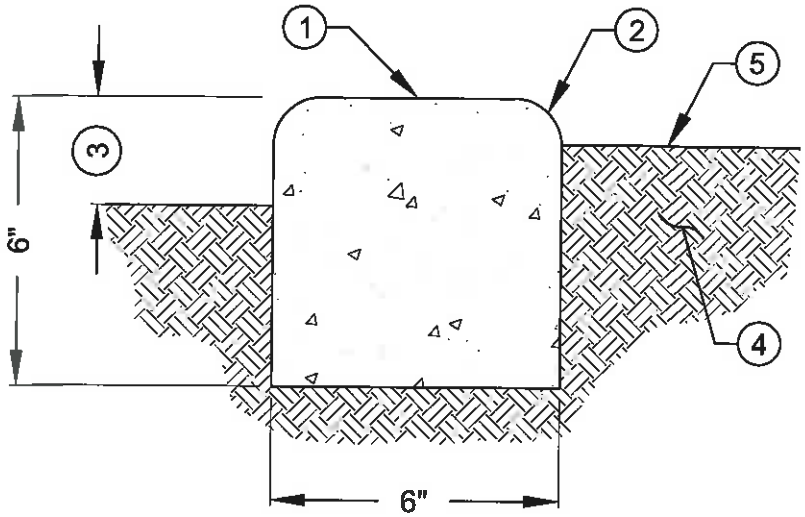
Notes:

- All wall surface below ground shall be coated with waterproofing sealant - meet or exceed A.S.T.M. D449 Type I
- Any proposed modification to wall design or alternate design requires approval from City Building Division and Public Works Department.
- Drain grate must be located within slope bench area. Horizontal portion of drain at 2% from flowline of City curb & gutter requires pipe installation through wall footing.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	LMAD STANDARD WALL DETAIL	H-05
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER	SHEET 1 OF 1



① Concrete mow edge with light broom finish - provide expansion joints @ 20' intervals max.

② $\frac{1}{2}$" radius (typical)

③ 3" @ lawn area 3" @ ground cover

④ 95% min. compacted subgrade - under mow strip only

⑤ Finish grade includes 3" of mulch

Note: Provide mow curb at end of limit or where planted area changes and to separate LMAD/DFAD area from private property.

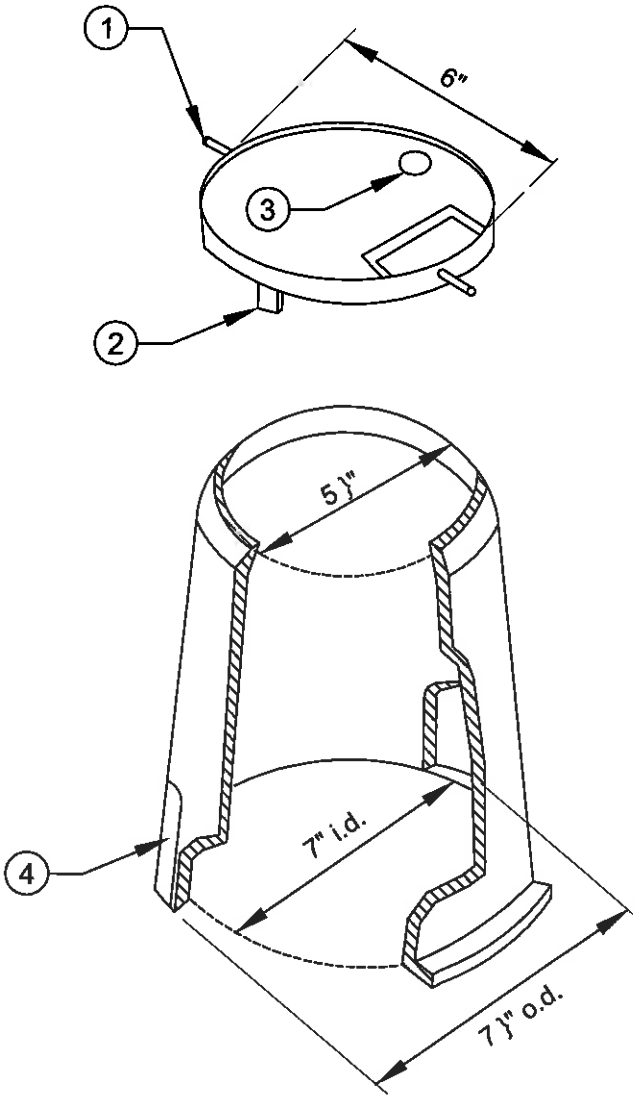
CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	MOW EDGE	H-06
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

REPAIR STANDARD DETAILS

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



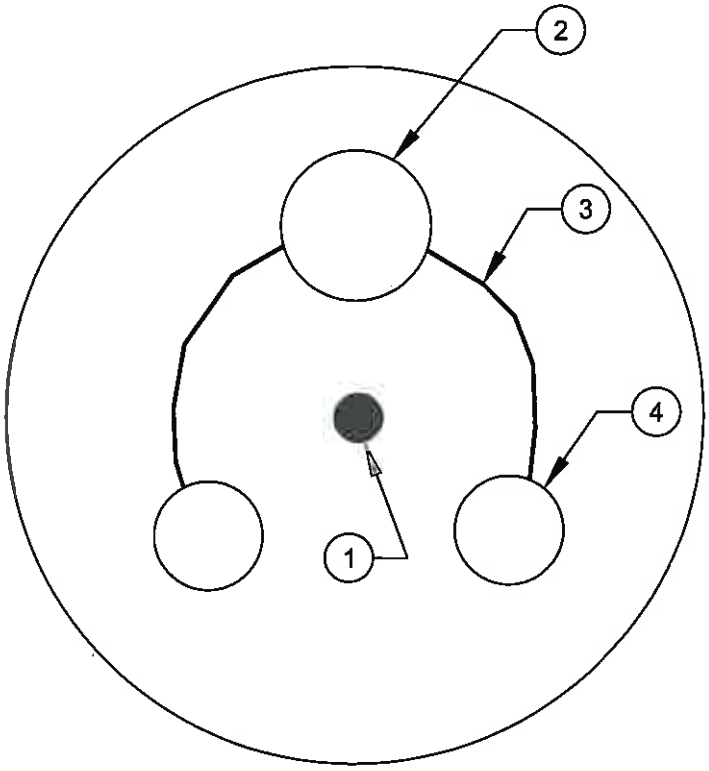
1. Location of #8 screws (see note)
2. "Snap- lock" tab
3. Cover lift hole
4. 2" x 2" pipe slots (2 places)

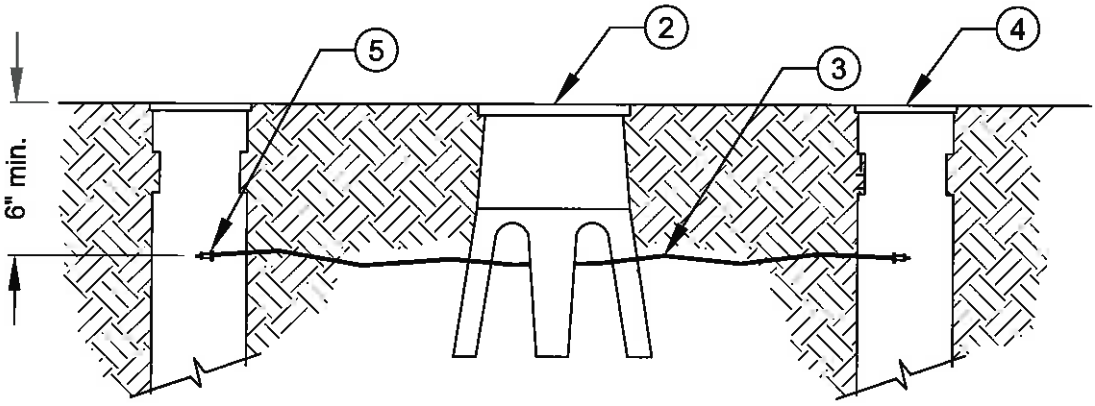
Notes:
1. Use brooks xx series or equal
2. Spanner screw $\frac{3}{8}$" x 2", anti- theft.
3. Cover st. - 5 oz.
4. Body wt. 1 lb. 6 oz

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	SMALL COVER BOX DETAIL	R-01
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).
CITY NO LONGER ALLOWS DRIP SYSTEMS.





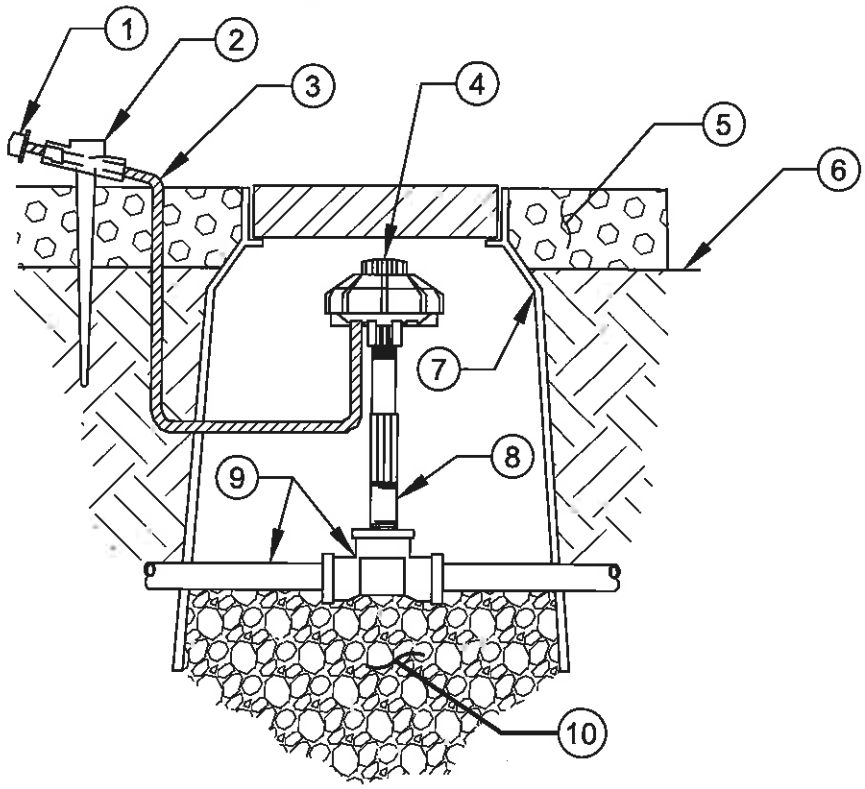
1. Tree
2. Emitter within brooks 70 series box
3. 1/4" distribution tubing
4. 4" perforated pcv pipe (typ.)
5. Diffuser bug cap (typ.)

Note: See irrigation legend for type and size of emitter.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	DRIP DISTRIBUTION DETAIL	R-02
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



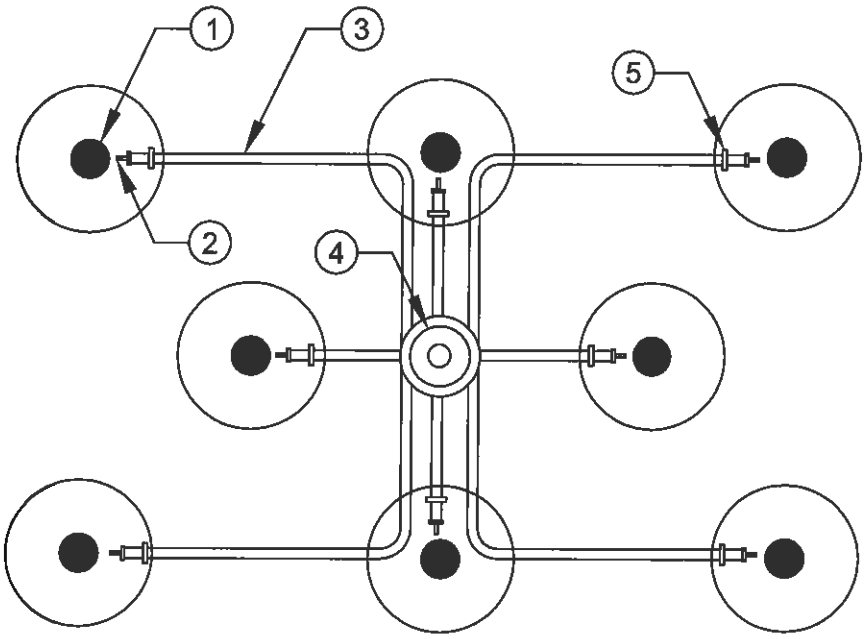
1. Difuser bug cap
2. 1/4" Tubing stake
3. 1/4" distribution tubing max. length not exceed 20 feet
4. Xeri-bird 8 (see irr. legend for gph/port)
5. Mulch bed 3"
6. Finish grade
7. Emitter box (Brooks 70 series)
8. PVC sch 80 riser (length as required)
9. PVC sch 40 pipe and sch. 80 fitting (12" cover min.)
10. 3/4" crushed rock

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	8 PORT EMITTER IN BOX DETAIL	R-03
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



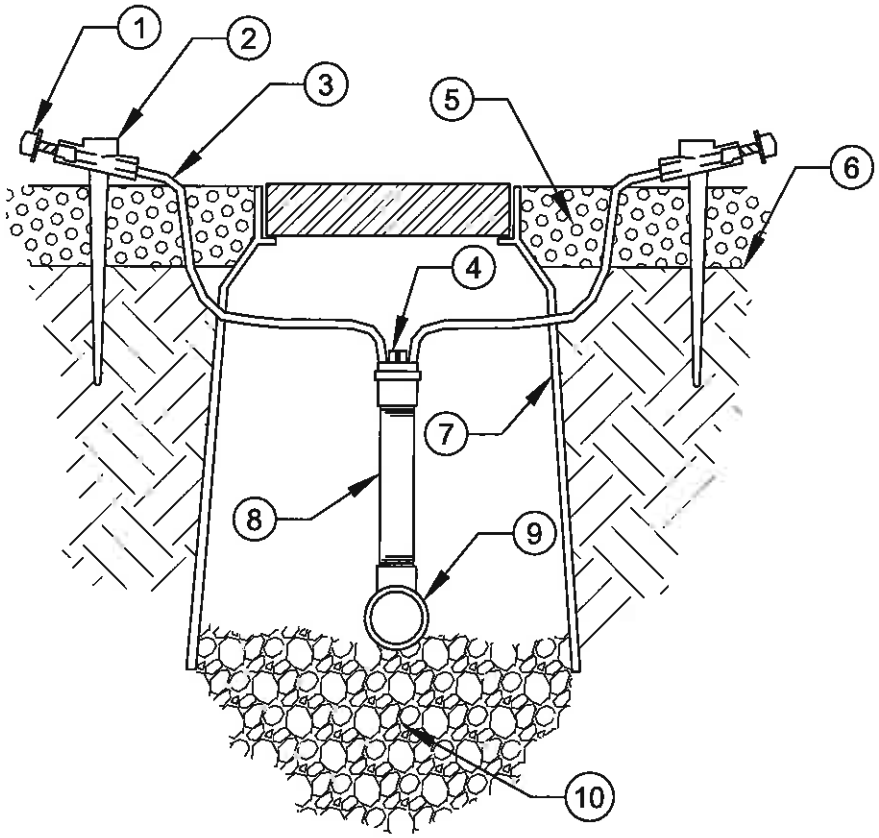
PLAN VIEW

1. Plant material (typ.)
2. Diffuser bug cap (typ.)
3. 1/4" distribution tubing max. length not to exceed 20 ft.
4. Xeri-bird 8 multi-outlet emission device gph flow/ port per irrigation legend
5. Tubing stake (typ.)

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	8 PORT EMITTER LAYOUT DETAIL	R-04
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



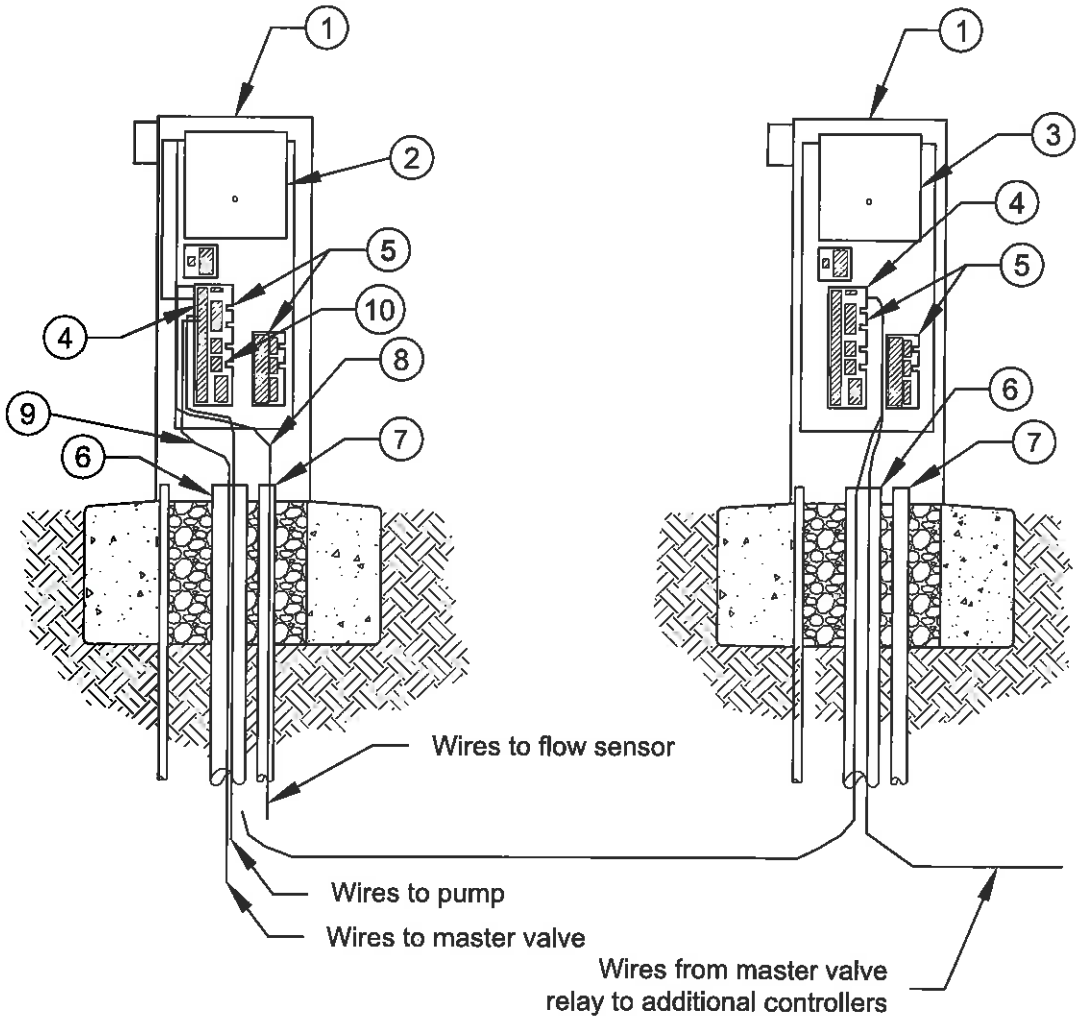
1. Diffuser bug cap
2. 1/4" Tubing stake
3. 1/4" distribution tubing max. length not exceed 20 feet
4. Multi-outlet xeri-bug emitter
5. Mulch bed 3"
6. Finish grade
7. Emitter box (Brooks 30 series)
8. PVC sch 80 riser (length as required)
9. PVC sch 40 pipe and sch. 80 fitting (12" cover min.)
10. 3/4" crushed rock

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	MULTI-OUTLET EMITTER IN BOX DETAIL	R-05
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



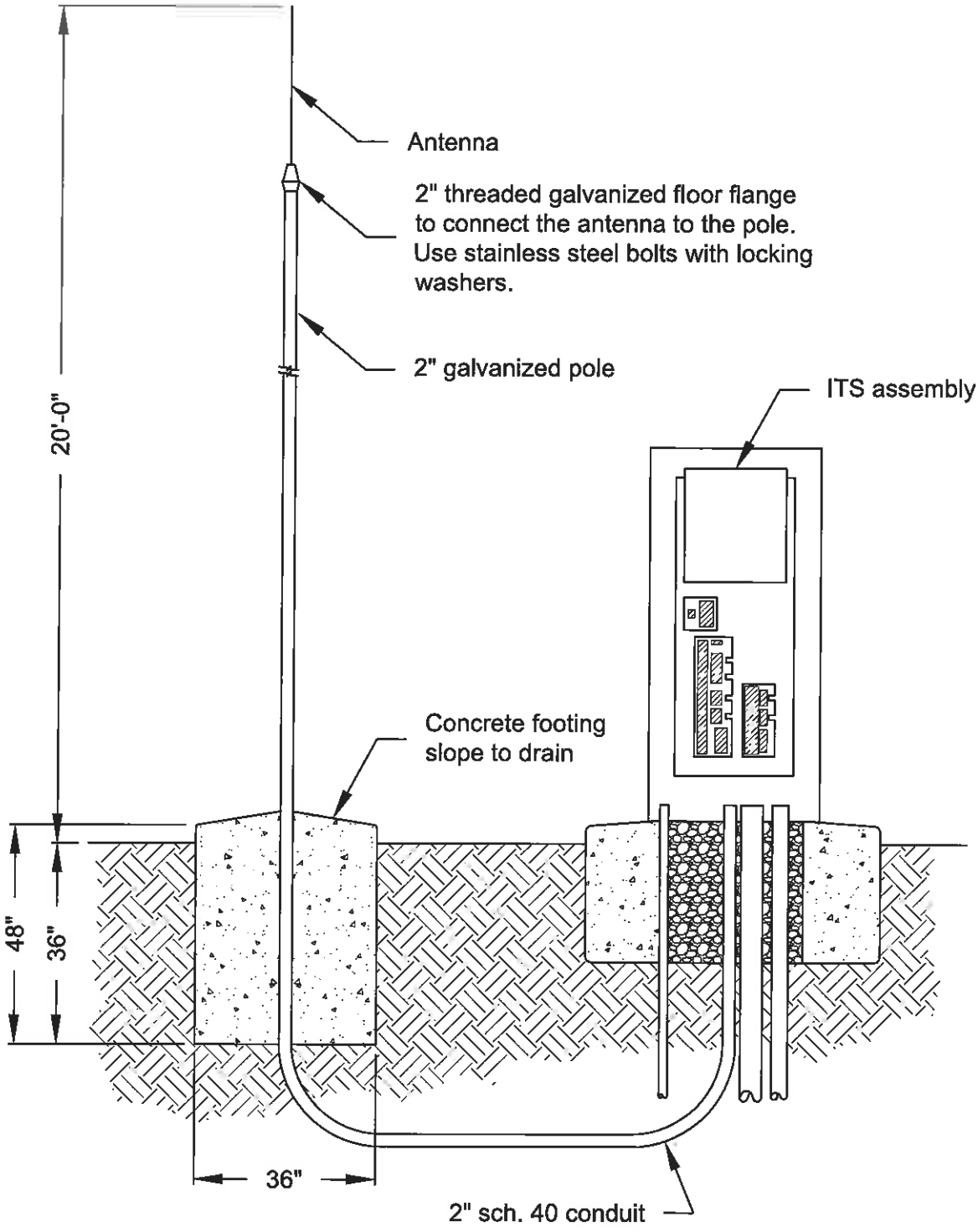
1. Imperial assemblies 18" front entry satellite assembly NEMA 3R rain proof enclosure (UL listed)
2. Controller 1 &/or 2
3. Controller 3 &/or 4
4. Master valve relay assembly or pump start relay assembly (optional)
5. Terminal board
6. PVC conduit for control wires, size as required.
7. 1" PVC conduit for flow sensor cable
8. Flow sensor cable Paige Cable P-7162- D to flow sensor
9. Master valve two (2) wires Paige cable P-7001D- REV5 to the master valve
10. Three (3) Paige cable P-7001D-REV5 wires from the master valve relay/pump start relay to the controller 3 and 4
11. Rain shut-off device with enclosure wired to the terminal board

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	MASTER VALVE-FLOW SENSOR, PUMP START, & RAIN SENSOR FOR MULTIPLE CONTROLLERS (CENTRAL CONTROL)	R-06
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).

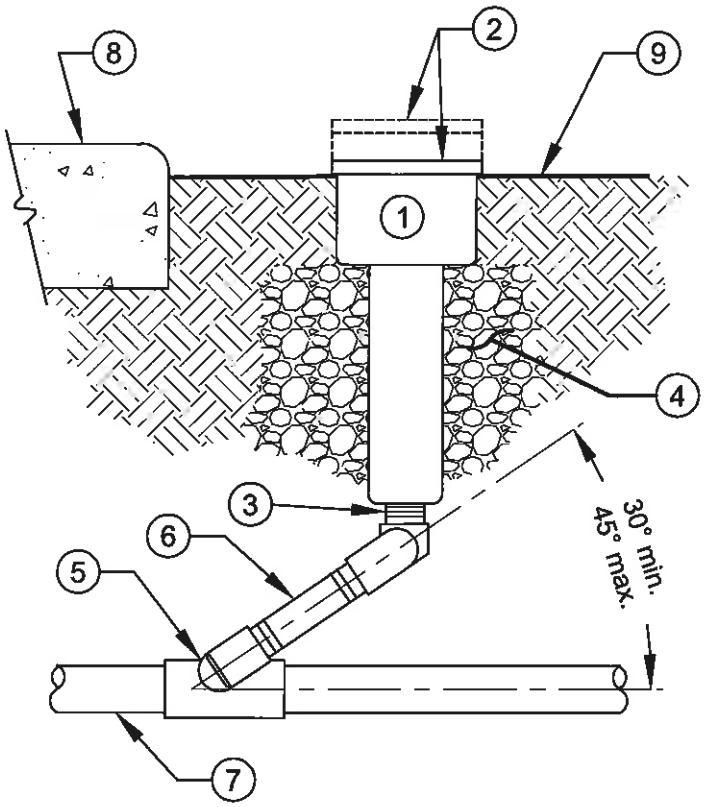


CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	OMNI ANTENNA ON POLE	R-07
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



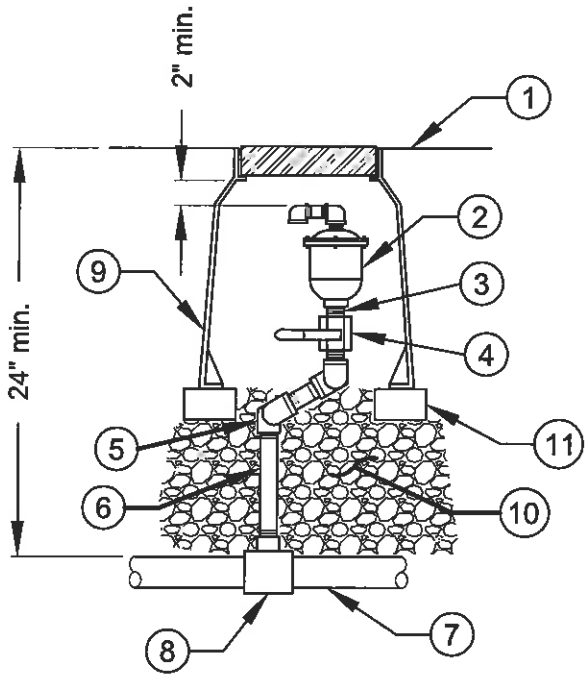
1. Pop up rotor head
2. Install 3" above grade in seeded areas or flush with grade in established turf areas.
3. Fabricate with:
   (3) Street ell
   (1) 12" L. nipple (sch 80)
4. S x S x T tee or ell (pvc sch. 80)
5. Lateral line
6. Walk, curb, paving or other improvement
7. Finish grade includes 3" of mulch

NOTES:
1. All threaded fittings shall be wrapped with teflon tape (1-1/2 to 2 wraps)
2. Flush pipes prior to installing sprinklers on swing joint.
3. Pop up spray head install above grade. Install heads-up marking flag to each spray head. Reset to grade in established turf areas. Compact backfill around spray head & swing joint assembly.
4. Swing joint shall be same size as spray head inlet.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	POP-UP ROTOR (LARGE RADIUS THROW)	R-08
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



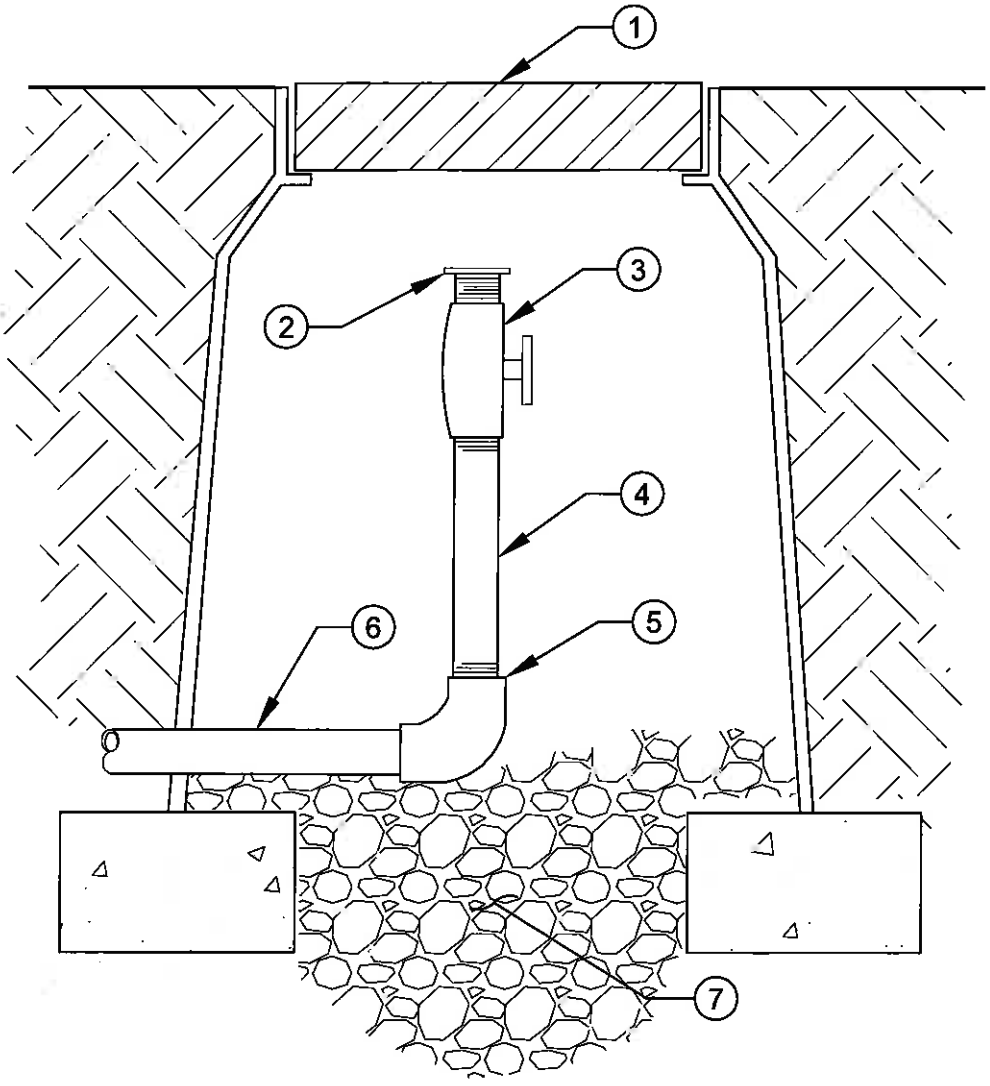
1. Finish grade includes 3" of mulch
2. Combination air valve (cav) with vent drain (galvanized)
3. (2) 2" x 3" L. galvanized steel nipples
4. 2" ball valve (full flow)
5. 2" galvanized steel swing joint 2" includes:
   (4) 90° threaded elbows
   (4) 2" x 4" L threaded nipples
   (2) 2" x 8" L threaded nipples
6. Galvanized steel nipple (length as req'd.)
7. PVC mainline pipe
8. Mainline fitting (ductile iron) tapped coupling or service saddle.
9. Valve box (standard round box with locking lid, install flush to grade. Hot brand lid "CAV"
10. 3/4" crushed rock or gravel install 12"deep
11. 2" red brick at corner

Notes:
1. Flush pipes prior to installing valve.
2. Paint all galvanized steel items with 2 coats of a corrosion resistant material.
3. Compact soils around valve box to 90%-95% of original dry density.
4. Wrap all threads with teflon tape, 1 to 2 wraps maximum
5. Install heads-up marking flag on valve box lid. Contractor to maintain flagging until project is complete.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	COMBINATION AIR VALVE	R-09
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



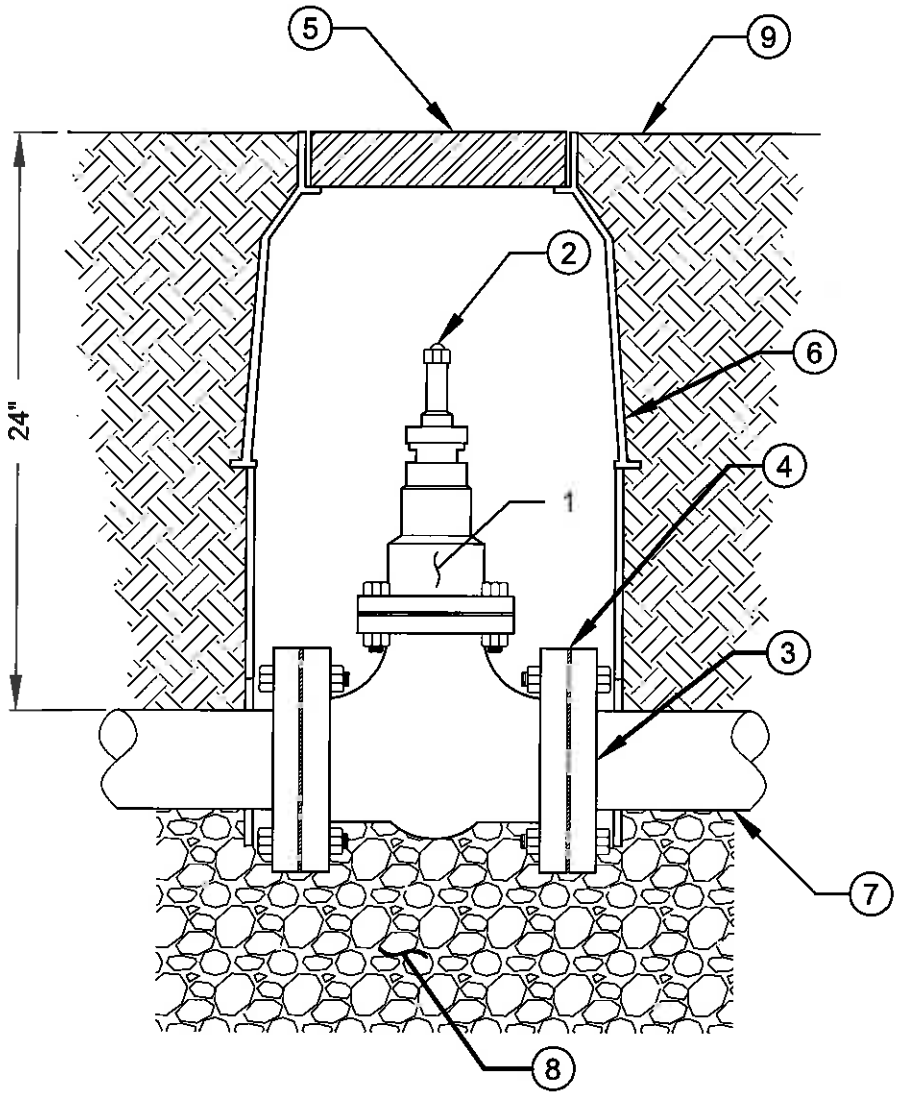
1. Brook 1110 10' round locking valve box. Hot brand lid "FV"
2. Brass hose adapter
3. Flush valve
4. PVC sch. 80 nipple
5. PVC sch. 80 ells s x t
6. PVC sch. 40 lateral main line
7. 3/4" dia. gravel

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	FLUSH VALVE DETAIL	R-10
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).

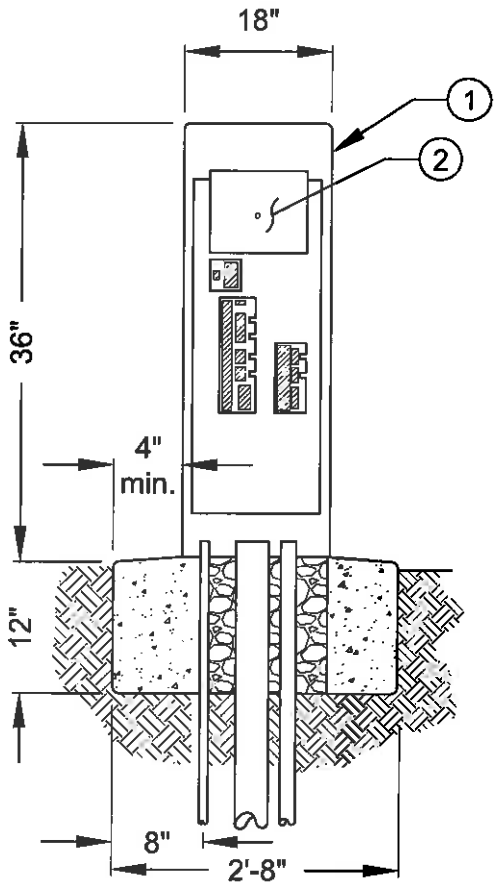


1. Gate Valve
2. 2" square operating nut
3. Companion flange (line size)
4. Companion flange gasket (line size)
5. Round valve box with locking cover, install flush with grade. Hot brand lid "GV"
6. 6" pvc sch. 40 pipe extension (length as required) keep inside free of debris.
7. PVC mainline 4" or larger
8. 3/4" pea gravel (two c.f. min.)
9. Finish grade includes 3" of mulch

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	FLANGED GATE VALVE (4" OR LARGER)	R-11
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



(1) Existing controller assembly rainproof enclosure (UL listed)

(2) **ET Water - 50 Pin Retrofit Panel for Rain Bird ESP Controllers** (see attached installation instructions)

* 110V power to be turned off

* Contractor shall remove exisitng Rain Bird ESP style panel fade-plate and disconnect 50 pin connector from output board.

* Install provided brackets

* Install 50 pin ET Water faceplate and connect ribbon cable to exisitng Rain Bird output board.

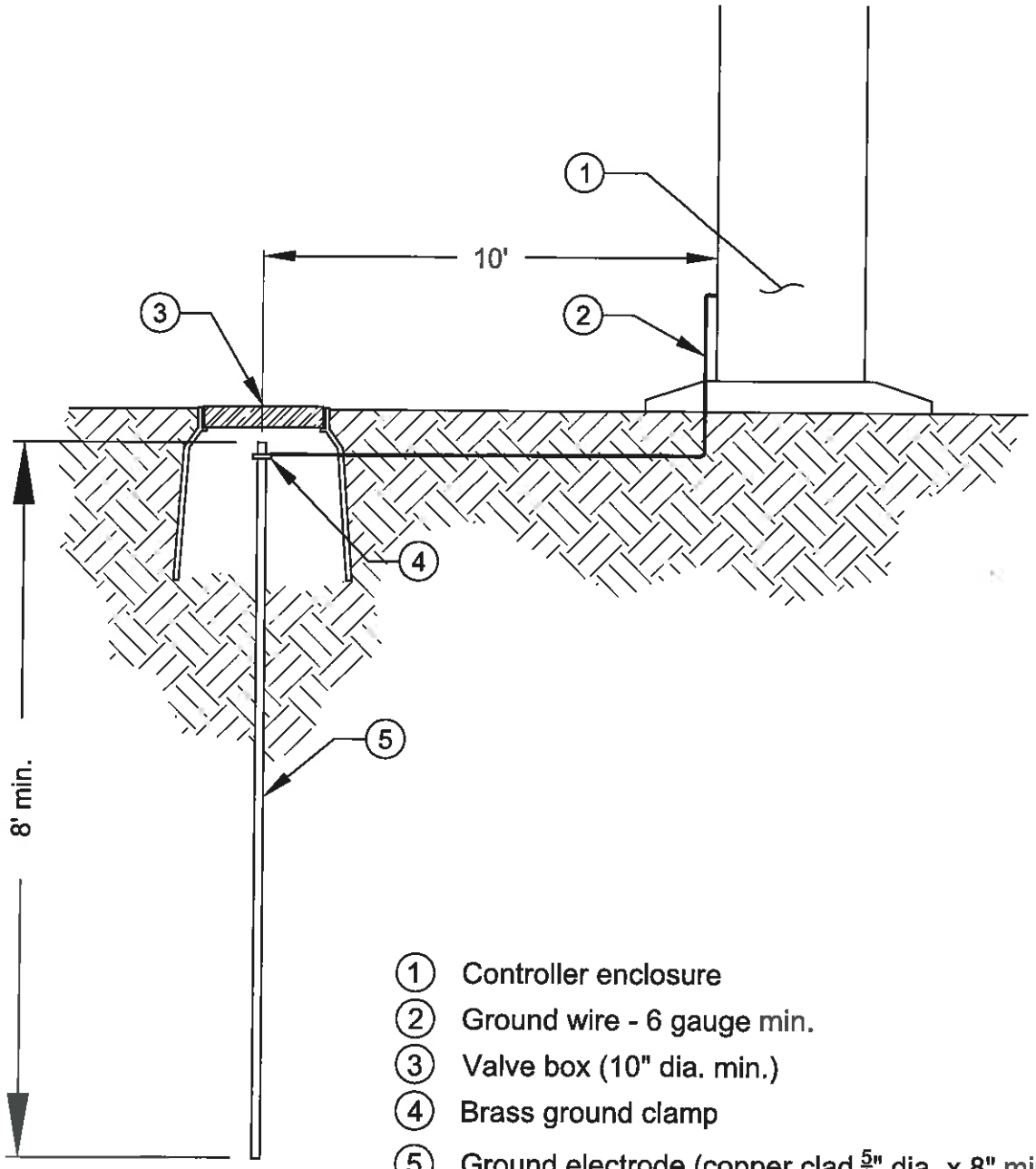
* Install dome type antenna to enclosure and connect to new ET Water faceplate

* Activate system per instructions

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	RAINBIRD CONTROLLER REPLACEMENT	R-12
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1



1. Controller enclosure
2. Ground wire - 6 gauge min.
3. Valve box (10" dia. min.)
4. Brass ground clamp
5. Ground electrode (copper clad $\frac{5}{8}$" dia. x 8" min. rod) minimum 10' from control panel

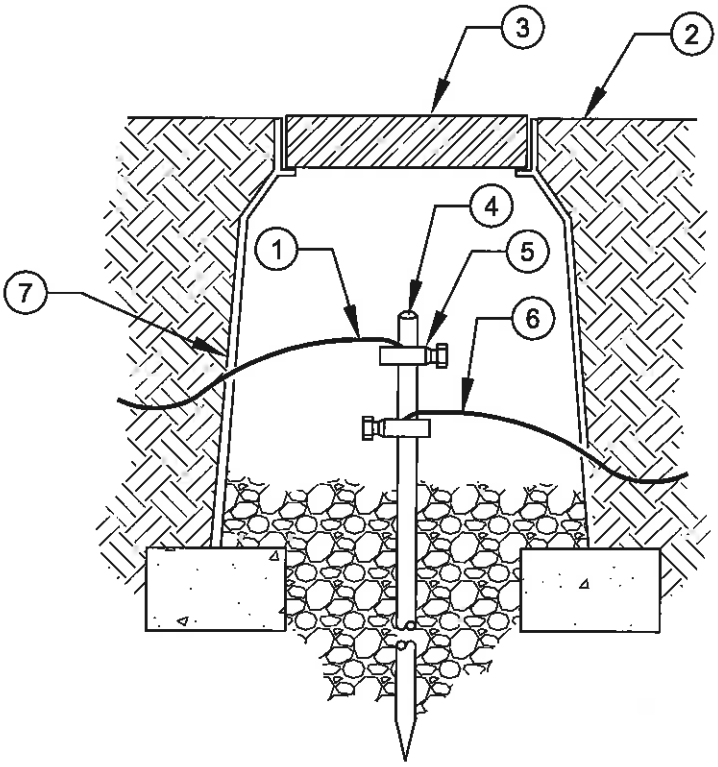
Note:

Ground conductor shall be the shortest length possible with no sharp bends, kinks, or coils in the wire. Exposed wire shall be in an approved conduit or armored cable.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	MINIMUM GROUNDING REQUIREMENTS	R-13
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



1. #6 bare copper wire from previous rod in grid
2. Finish grade includes 3" of mulch
3. Standard valve box with cover, hot brand lid "GR".
4. Grounding rod from GK-UL3ROD three rod kit
5. Brass clamp (1 of 2)
6. #6 bare copper wire to next rod in grid
7. Valve box (10" diam. min.) See Specification Booklet page 20.

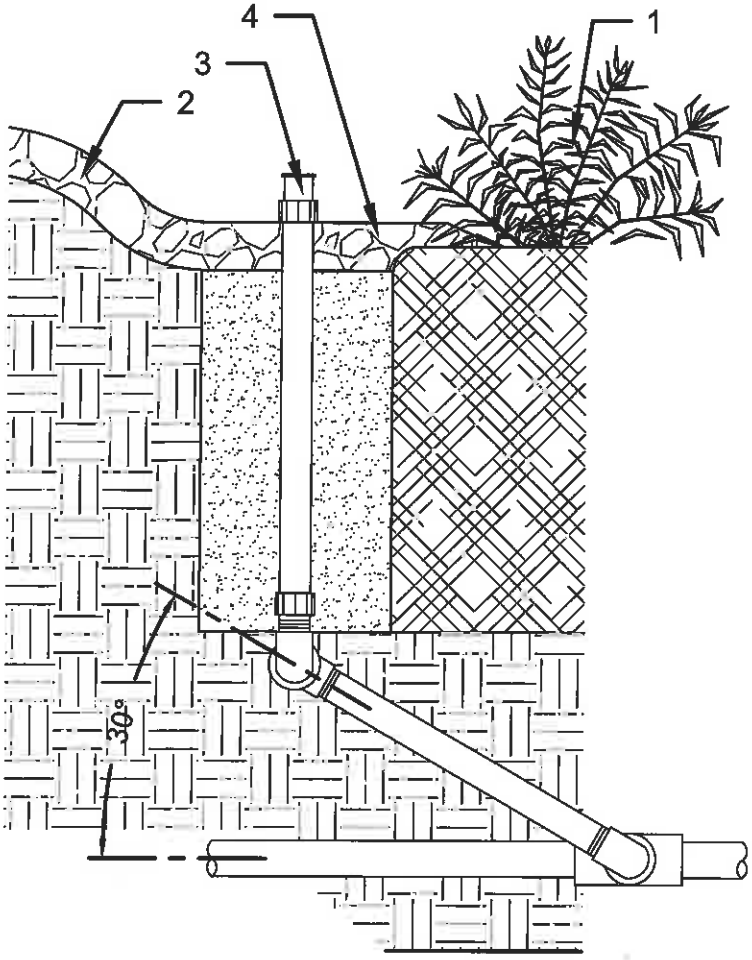
NOTE: See grounding rod notes for installation instructions.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	GROUNDING WIRES IN BOX DETAIL	R-14
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

IRRIGATION STANDARD DETAILS



NOTE:
INSTALL DRIP EMITTER INSIDE OF PLANT WATERING BASING ADJACENT TO ROOT BALL.

FLEXIBLE PVC RISERS SHALL BE PREFABRICATED BY THE MANUFACTURER UNLESS OTHERWISE APPROVED BY LMD REPRESENTATIVE.

BUBBLER SPACING SHALL HAVE A MINIMUM DISTANCE OF 24 INCHES AND A MAXIMUM DISTANCE OF 36 INCHES. ANY VARIATION MUST BE APPROVED BY CITY STAFF.

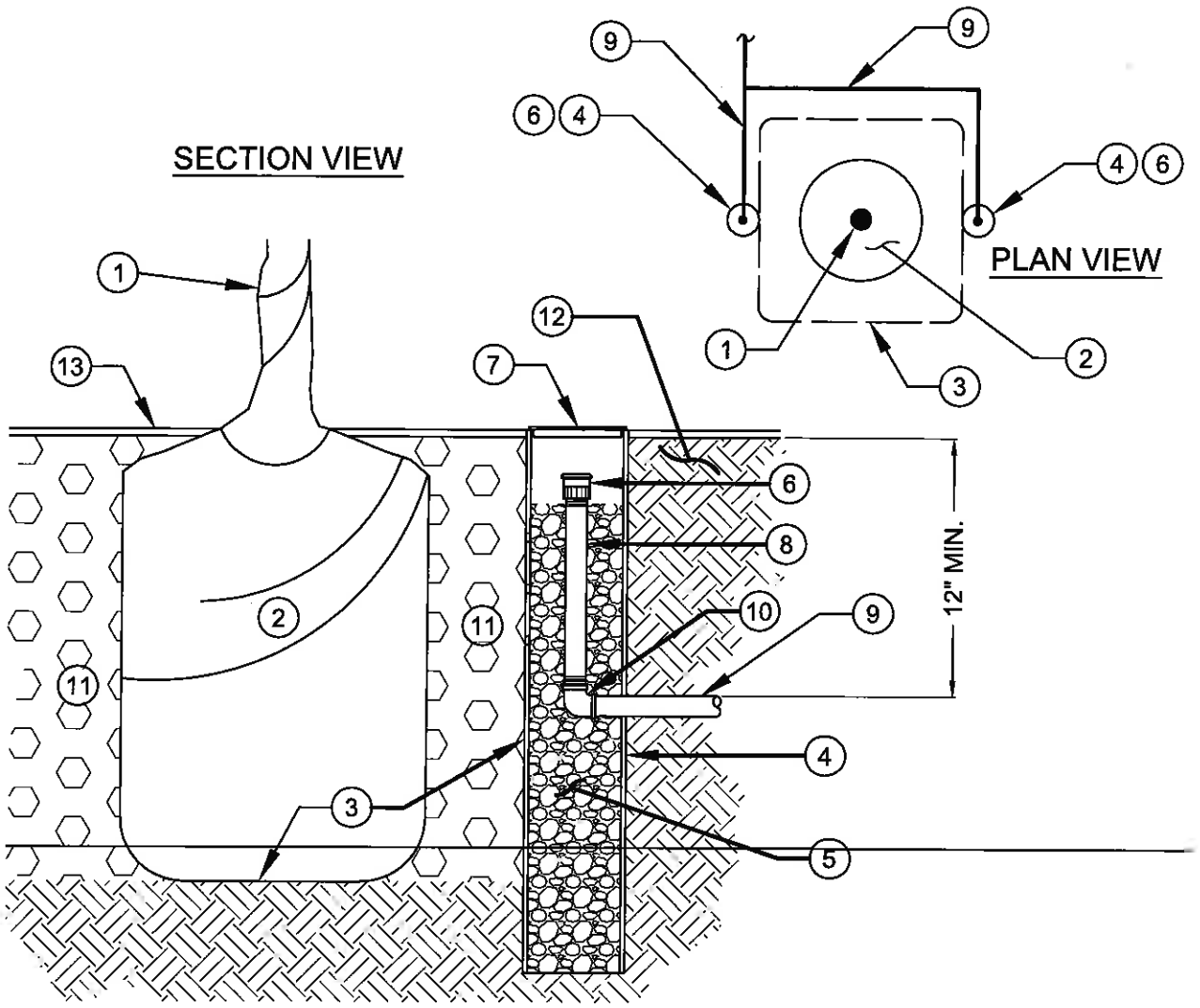
1. SHRUB OR GROUND COVER
2. PLANT WATERING BASIN
3. PURPLE EMITTER NOZZLE AND SCREEN, SEE SPECIFICATIONS
4. MULCH PER PLANTING DETAILS
5. AMENDED BACKFILL
6. 1/2" X 12" PVC RISER SCH 80"

6a. (2) SCH 40 STREET ELL

7. PLANT ROOT BALL
8. SCH 40 S x S x T TEE (OR ELBOW)(LATERAL SIZE x 1/2" FIPT
9. PVC LATERAL LINE.
10. ONE (1) BUBBLER PER PLANT

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	BUBBLER & SWING JOINT ASSEMBLY	I-01
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



1. Tree trunk
2. Root ball
3. Edge of plant pit
4. Rigid PVC perforated pipe (4"~ x depth of plant pit)
5. ¾" to 1" ~ pea gravel
6. Bubble nozzle
7. 4" ~ pvc cap or valve cover
8. PVC sch 80 nipple
9. PVC sch 40 lateral
10. PVC sch 40 S x T ell
11. Back fill mix
12. Native soil
13. Finish grade includes 3" of mulch

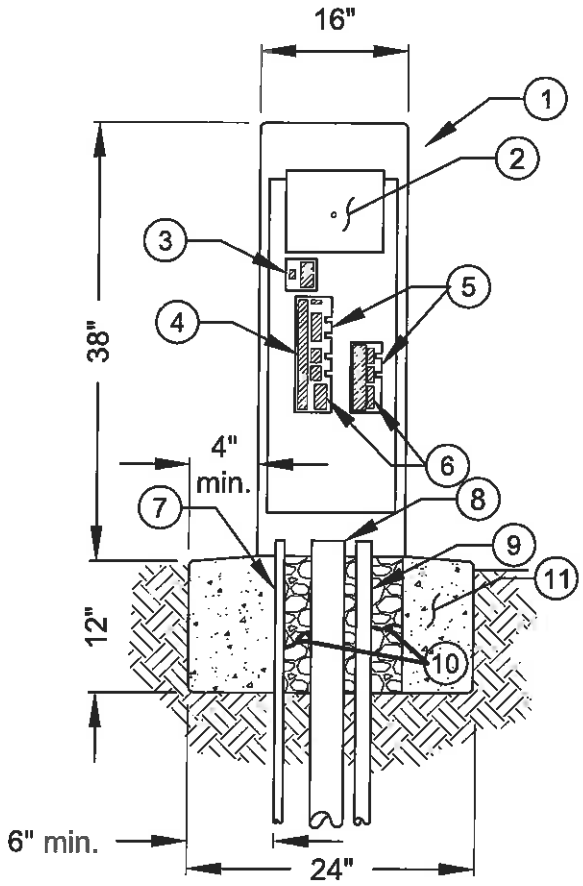
Notes:

1. Position perforated pipe on outside edge of plant pit wall. Face holes in pipe toward rootball.
2. See tree planting detail for additional requirements.

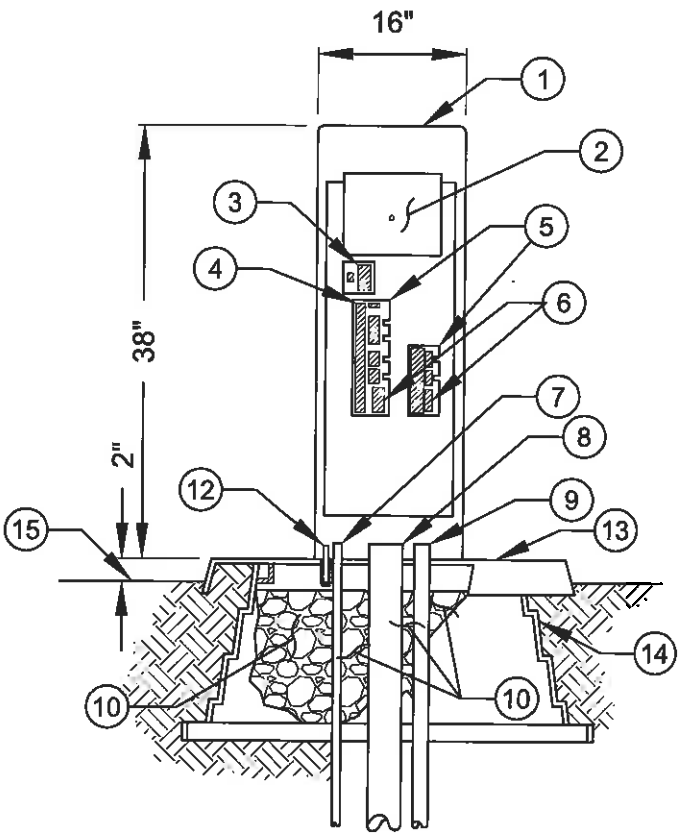
CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	BUBBLER IN SLEEVE	I-02
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1



Imperial Assembly with concrete base



Imperial Assembly with quick pad

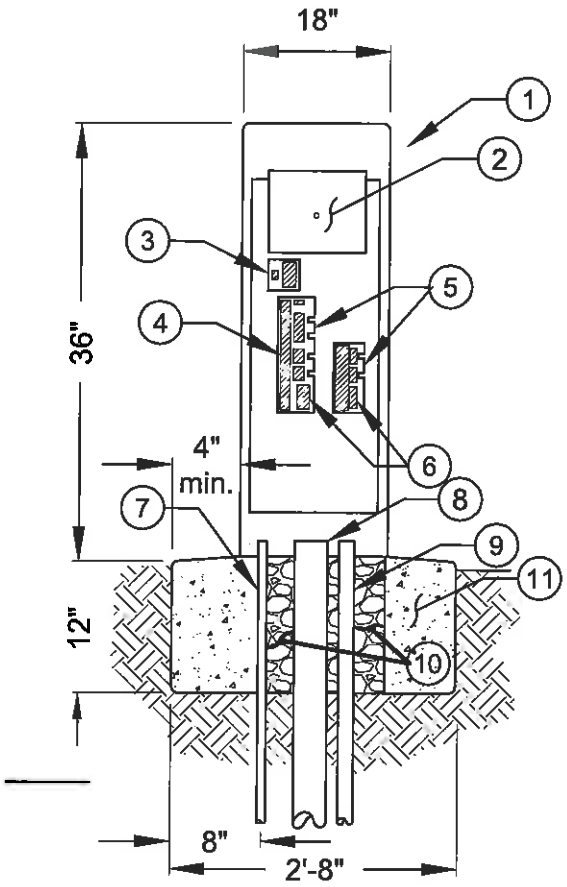
Note: All grounding requirements for controller assemblies shall conform to local electrical codes.

1. Imperial Assemblies 18" front entry Controller Assembly NEMA 3R rain proof enclosure (UL listed)
2. Controller
3. Power switch/GFI receptacle
4. Master valve relay assembly or pump start relay assembly (optional)
5. Terminal board
6. Remote receiver connector
7. 1" PVC conduit for 120 VAC from metered power supply
8. PVC conduit for control wires, size as required.
9. 1" PVC conduit for flow sensor cable PAIGE CABLE P-7162-D (if applicable)
10. Fill voids with $\frac{3}{8}$" pea gravel
11. Poured concrete base
12. Mounting pad mounting brace
13. Mounting pad aluminum power coated performed pad 20" x 30"
14. Mounting pad base
15. Finish grade 2" below top of mounting pad

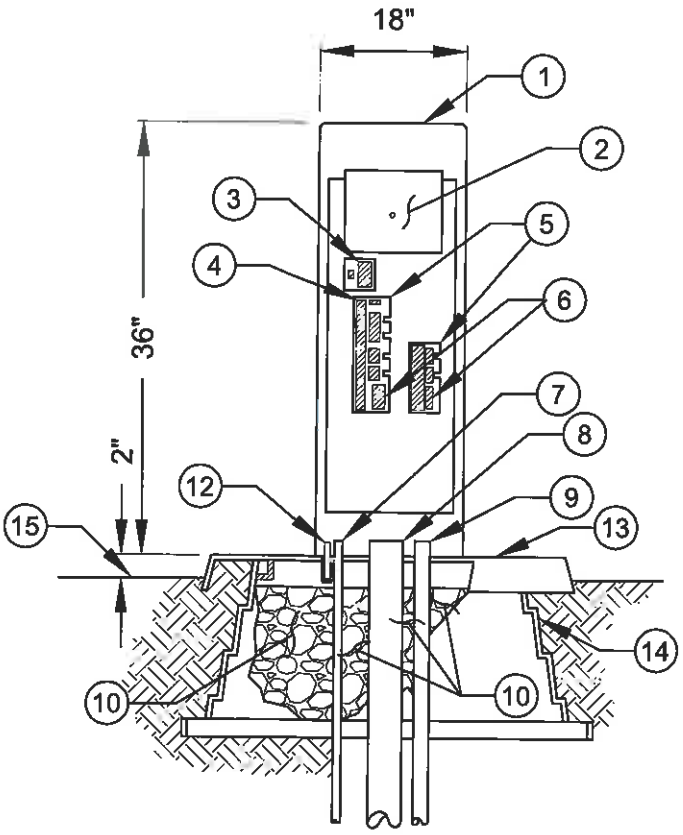
CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	16"x16" CONTROLLER ASSEMBLY (ICA6 SERIES)	I-03
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



Imperial Assembly with concrete base



Imperial Assembly with quick pad

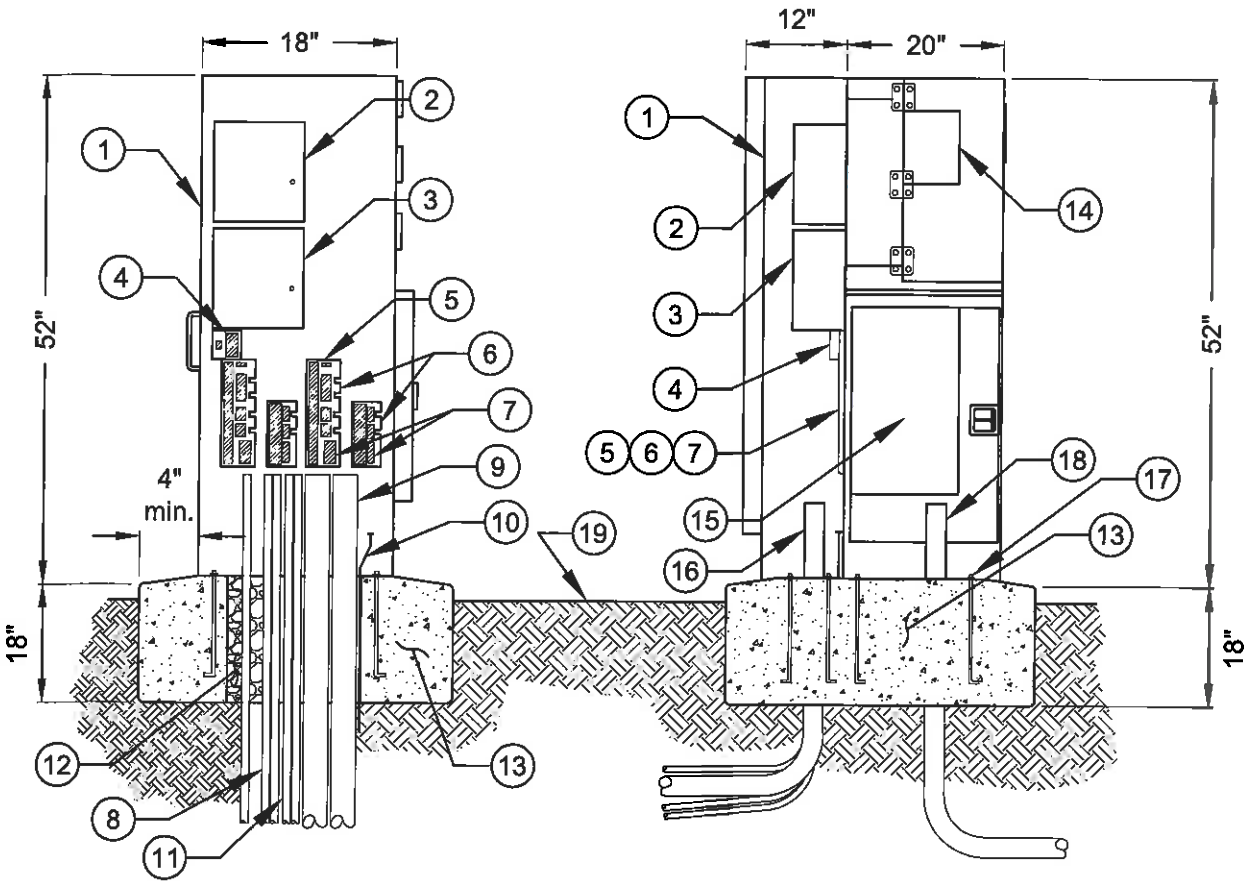
Note: All grounding requirements for controller assemblies shall conform to local electrical codes.

1. Imperial assemblies 18" top entry controller assembly NEMA 3R rain proof enclosure (UL listed)
2. Controller
3. Power switch/GFI receptacle
4. Master valve relay assembly or pump start relay assembly (optional)
5. Terminal board
6. RMPM Remote receiver connector
7. 1" PVC conduit for 120 vac from metered power supply
8. PVC conduit for control wires, size as required.
9. 1" pvc conduit for flow sensor cable Paige cable P-7162-D(if applicable)
10. Fill voids with $\frac{3}{8}$" pea gravel
11. Poured concrete base
12. Mounting pad aluminum power coated performed pad 20"x30"
13. Mounting pad base
14. Mounting pad mounting base
15. Finish grade 2" below top of mounting pad

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	18"x24" CONTROLLER ASSEMBLY (ICA2 SERIES)	I-04
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



Imperial Assembly with concrete base

Imperial Assembly with quick pad

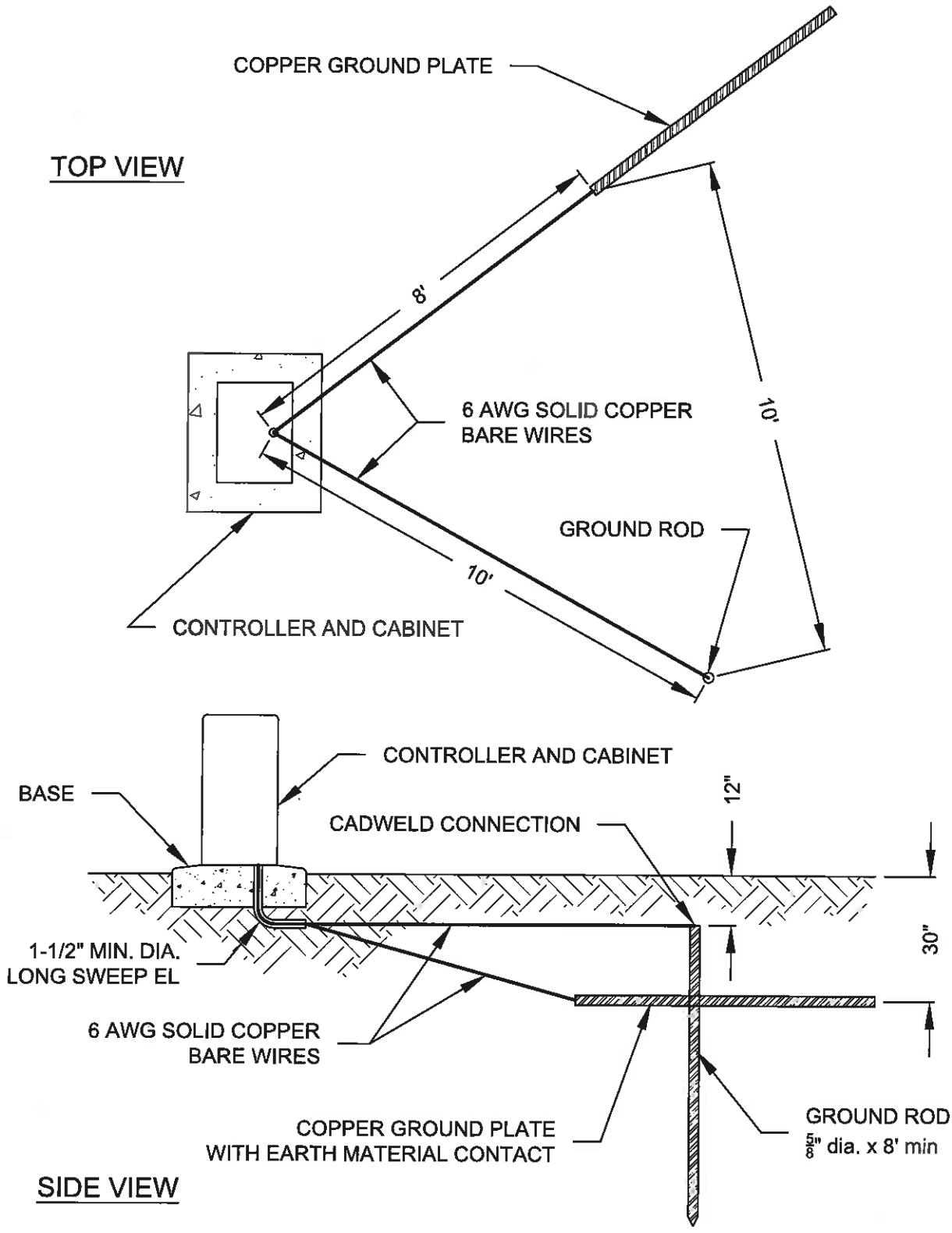
Note: All grounding requirements for controller assemblies shall conform to local electrical codes.

1. Imperial assemblies metered controller assembly NEMA 3R rain proof enclosure (UL listed)
2. Controller
3. Second controller
4. Power switch/GFI receptacle
5. Master valve relay assembly or pump start relay assembly (optional)
6. Terminal board
7. Remote receiver connector
8. 1" PVC conduit for 120 vac from metered power supply
9. PVC conduit for control wires, size as required.
10. #10 ground wire to ground lugs on the backboard.
11. 1" pvc conduit for flow sensor cable Paige cable P-7162-D(if applicable)
12. Fill voids with 3/8" pea gravel
13. Poured concrete base
14. Meter socket with test blocks
15. Load center compartment, see model number for phase type, voltage, size of amp, amp size for load center and the number of circuits.
16. PVC conduits for control wires, electrical, and flow sensing, size as required.
17. Stainless steel mounting base with 3/8" stainless steel anchor bolts in concrete
18. PVC conduit and electrical power source
19. Finish grade

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

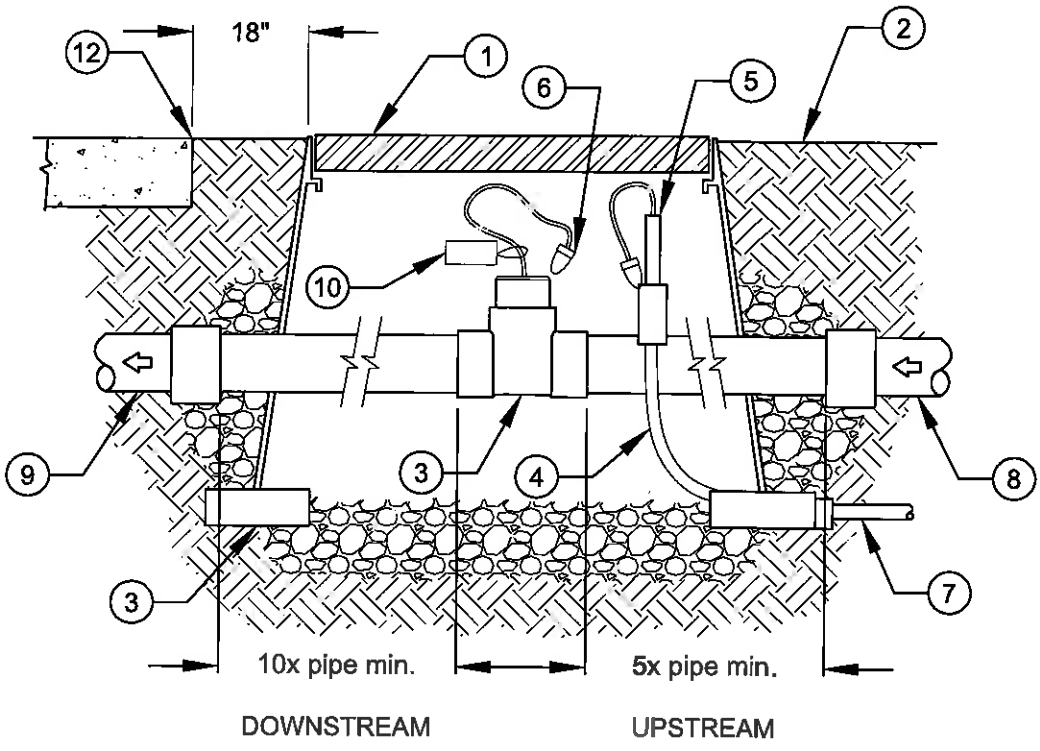
4/27/2016	18"x32" METERED CONTROLLER (ICA5 SERIES)	I-05
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	CONTROLLER GROUNDING	I-06
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



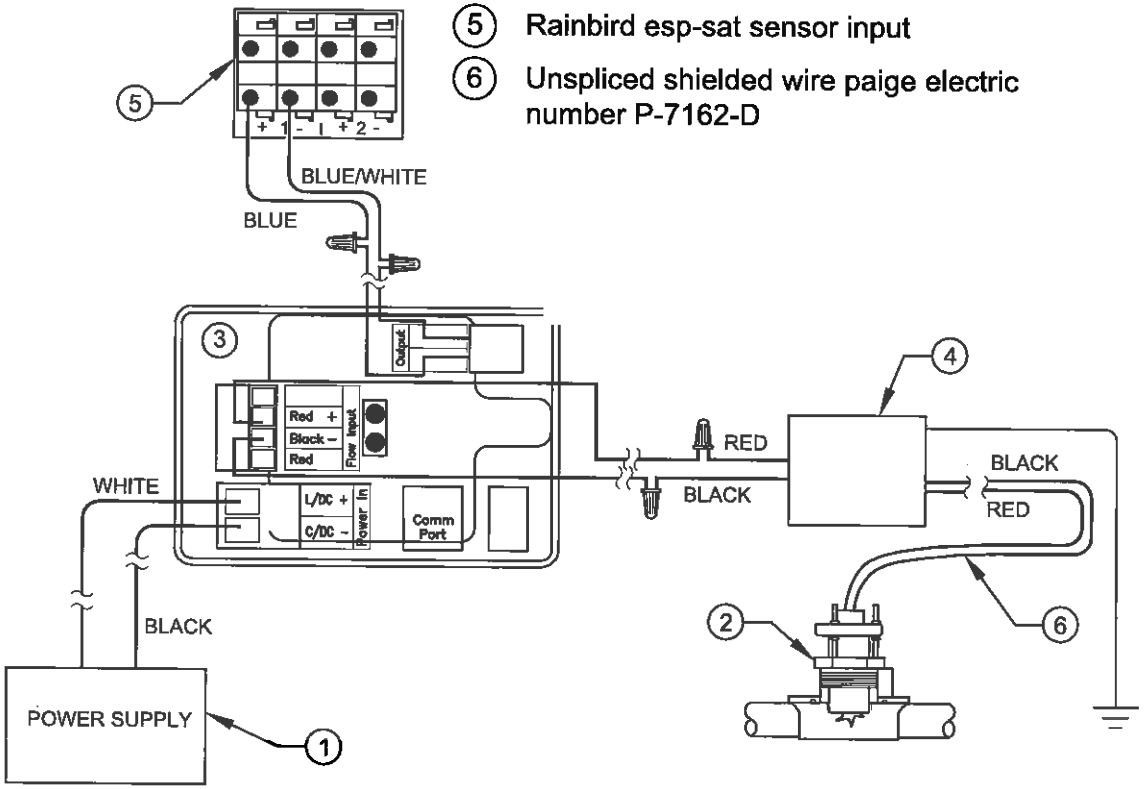
1. Rectangular plastic valve box. Hot brand lid "FS"
2. Finish grade includes 3" of mulch
3. Flow sensor
4. Flow sensor cable P-7162D
5. Conduit bushing
6. Waterproof dry splice connector 3M DBY
7. 1" electrical conduit and sweep elbow
8. Irrigation mainline from master valve
9. Mainline to the rcv's
10. Christy's tag #ID-Max- P2-RCIP2
11. Quantity of (4) - brick for stabilization
12. Edge of paving header or building wall

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	DATA INDUSTRIAL FLOW SENSOR	I-07
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1

1. Power supply (Rainbird #PTPWRSUPP)
2. Flow sensor (Rainbird "FS series
3. Surge protection kit (Rainbird "FSSURKIT")
4. Green wire to ground
5. Rainbird esp-sat sensor input
6. Unspliced shielded wire paige electric number P-7162-D



CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

I-08

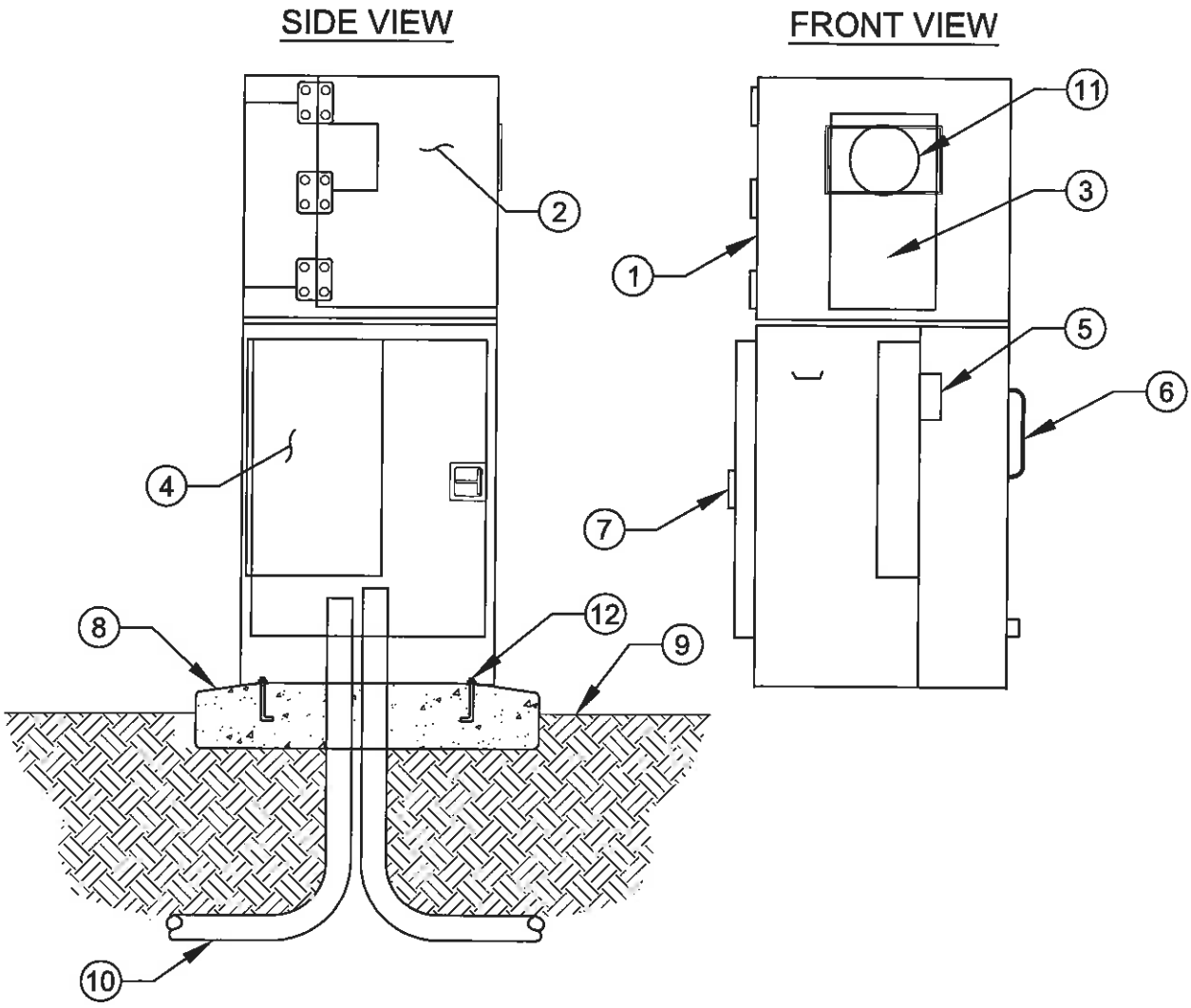
DATA INDUSTRIAL FLOW SENSOR DETAIL

SHEET 1 0F 1

APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler

4/27/2016

NOT TO SCALE



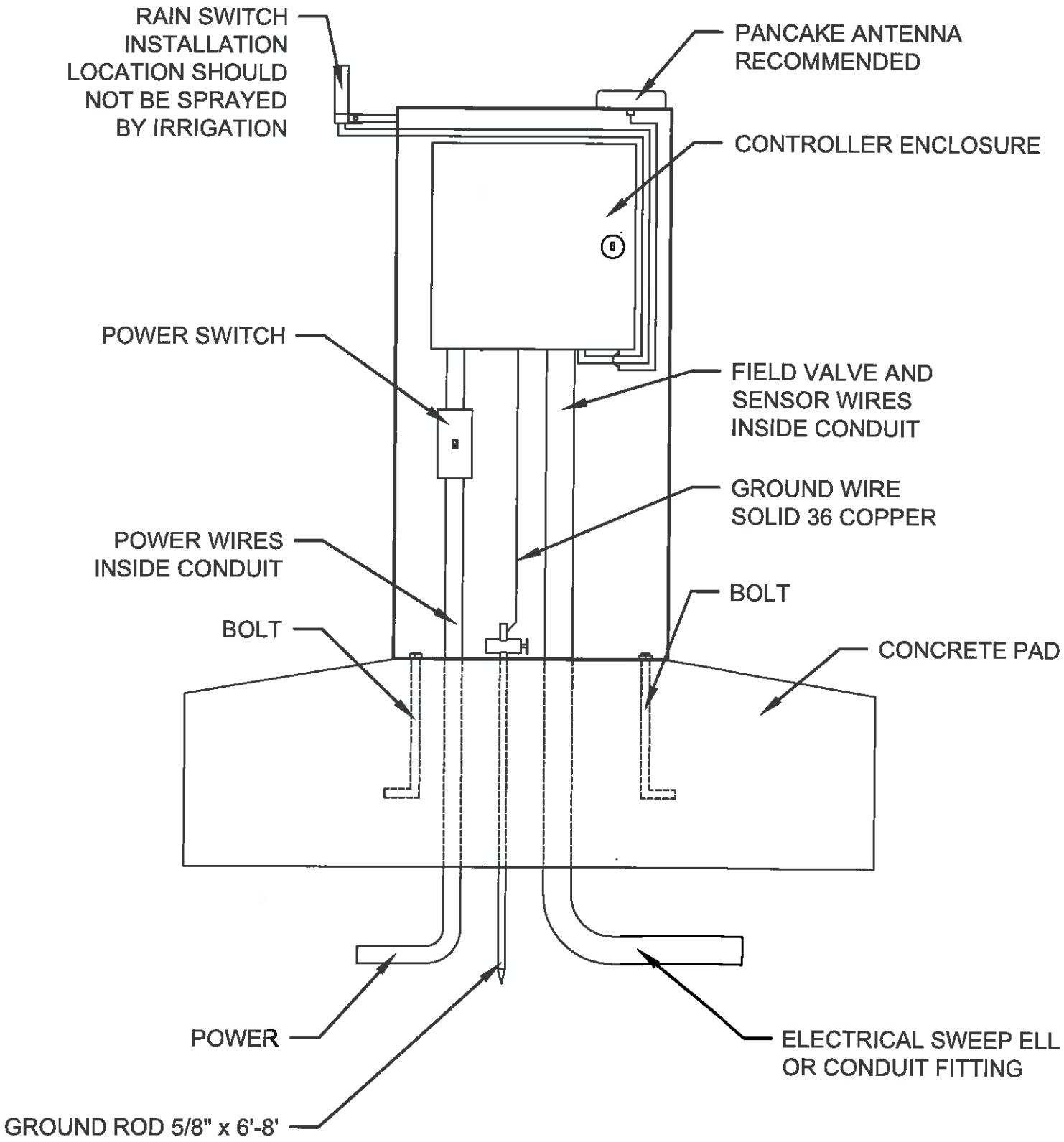
INSTALLATION DETAILS: MODELS MPS-A 16, MPS-B 16, MPS-D 18 100 AMP

1. Strong box metered enclosure, stainless steel, NEMA Type 3R - 18" x 20" x 52" #MPS-XXX-XX
2. Hinged removable lid
3. Meter socket with test blocks
4. Load Center
5. Landing Lugs
6. Landing lug compartment
7. Load center compartment
8. Poured concrete base - 6" min. thickness - extend 6" beyond outside dimensions of enclosure with 1/2% slope for drainage
9. Finish grade includes 3" of mulch
10. Underground service
11. Meter viewing window 5" x 10"
12. 3/8" stainless anchor bolts

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

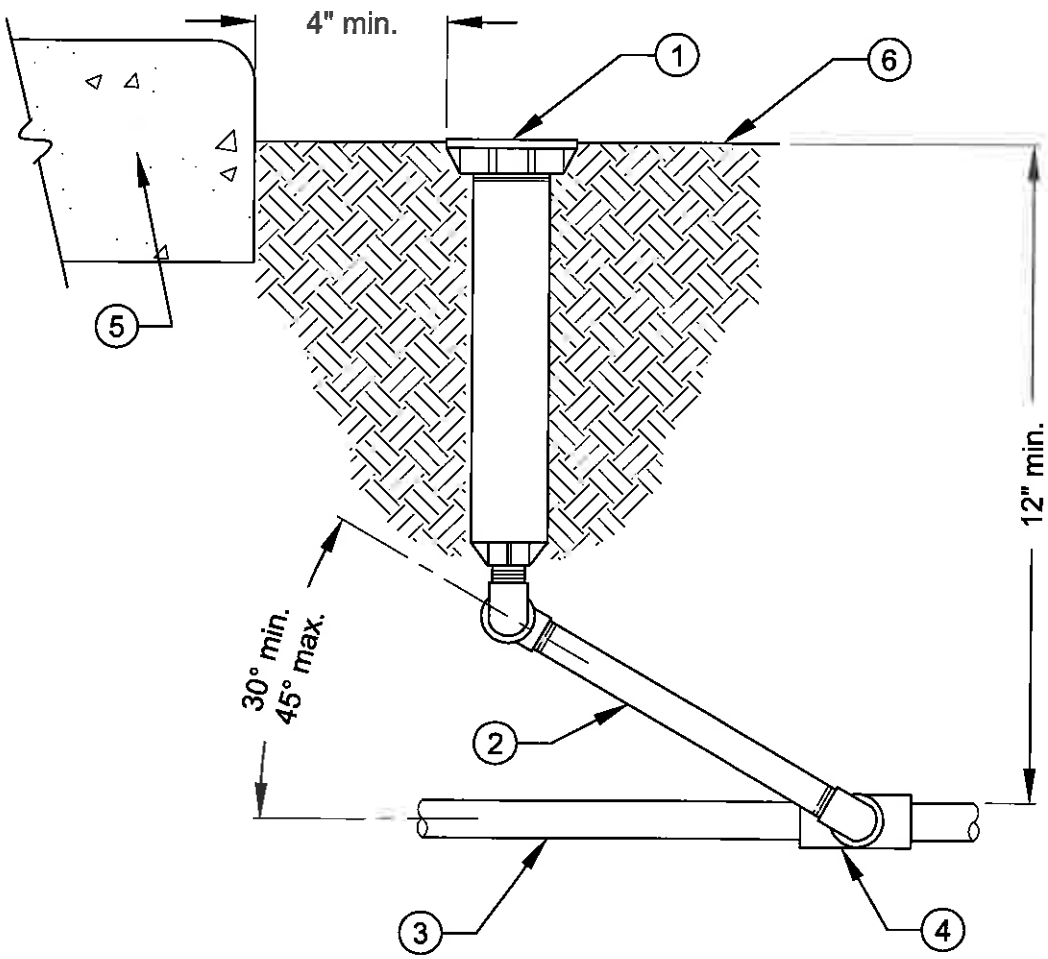
4/27/2016	STAINLESS STEEL METER PEDESTAL	I-09
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	TYPICAL ENCLOSURE INSTALLATION	I-10
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1

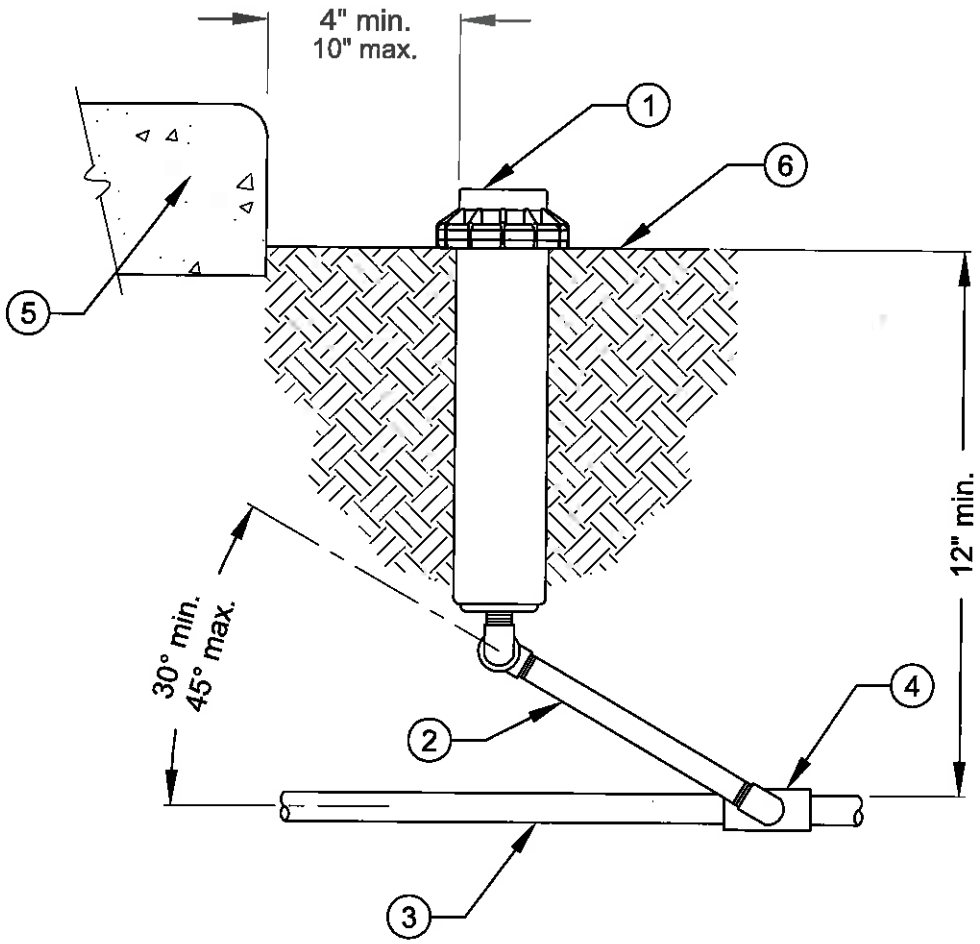


1. Pop up head
2. Fabricate with:
   (3) sch 40 street ell
   (1) SCH 80 12" nipple (or length as required)
3. Lateral line
4. S x S x T tee or S x T ell (pvc sch. 40)
5. Curb, walk, paving, other improvement,
6. Finish grade (includes 3" of mulch)

Notes:
1. All threaded fittings shall be wrapped with Teflon tape (1-1/2 to 2 wraps)
2. Flush pipes prior to installing sprinklers on swing joint.
3. Install heads-up marking flag to each spray head. Reset to grade in established turf areas. Compact back fill around spray head & swing joint assembly.
4. Swing joint shall be same size as spray head inlet.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	POP-UP SPRAY SPRINKLER	I-11
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

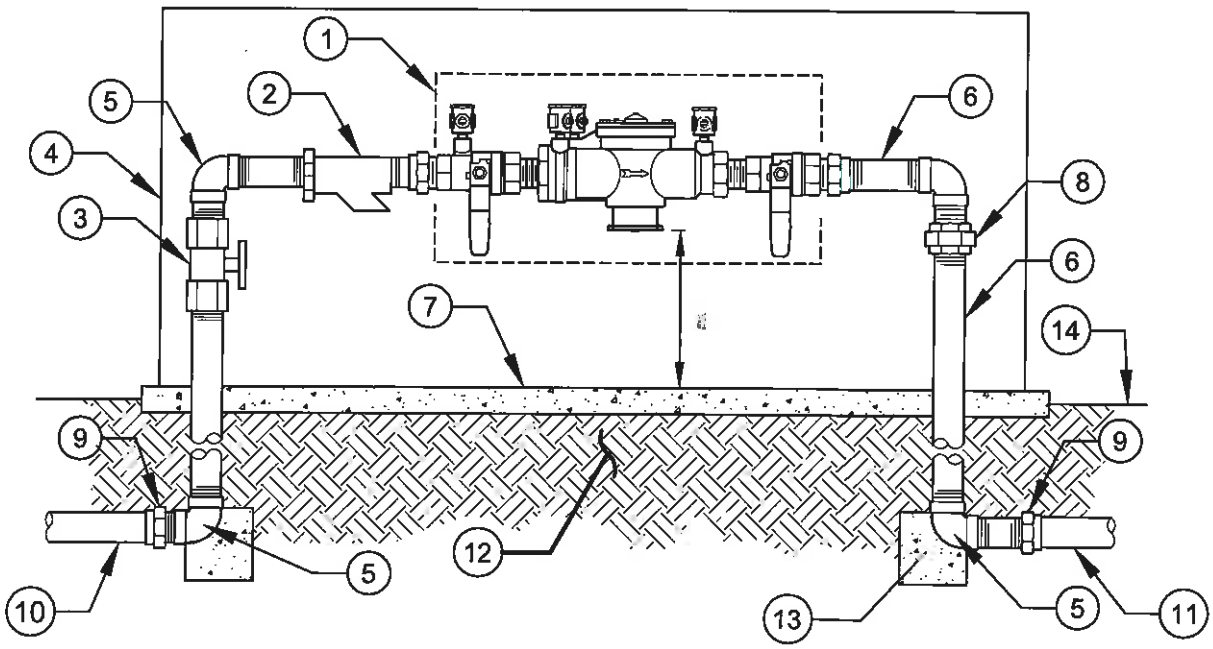


1. Pop up rotor head
2. Fabricate with:
   (3) sch 40 street ell
   (2) sch 80 12" nipple (or length as required)
3. Lateral line
4. S x S x T tee or ell (pvc sch 40)
5. Walk, curb, paving or other improvement
6. Finish grade (includes 3" of mulch)

Notes:
1. All threaded fittins shall be wrapped with teflon tape (1-1/2 to 2 wraps)
2. Flush pipes prior to installing sprinklers on swing joint.
3. Pop up spray head install above grade in newly planted shrub or ground cover areas. Install flush with grade in lawn areas. Install heads-up marking flag to each spray head. Reset to grade in established turf areas. Compact backfill around spray head & swing joint assembly.
4. Swing joint shall be same size as spray head inlet.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	POP-UP ROTOR (SMALL RADIUS)	I-12
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1



1. Reduced pressure backflow preventer per Engineering Dept. Standard W-39.
2. Wye strainer with 150 mesh screen (wilkens # YSBR or equal) Required on all reduced pressures 2" or smaller
3. Ball valve
4. Enclosure by "Strongbox" or equal
5. Threaded brass ell (typical) Qty 4
6. Threaded brass pipe (typical)
7. Concrete pad (2800 psi @ 28 days)
8. Union
9. PVC sch 80
10. Water service line to point of connection
11. PVC mainline (see irrigation legend for size and type) to irrigation system.
12. 90% compacted sub-grade
13. Concrete thrust block (one c.f. min) (typical) formed in undisturbed soil
14. Finish grade includes 3" of mulch

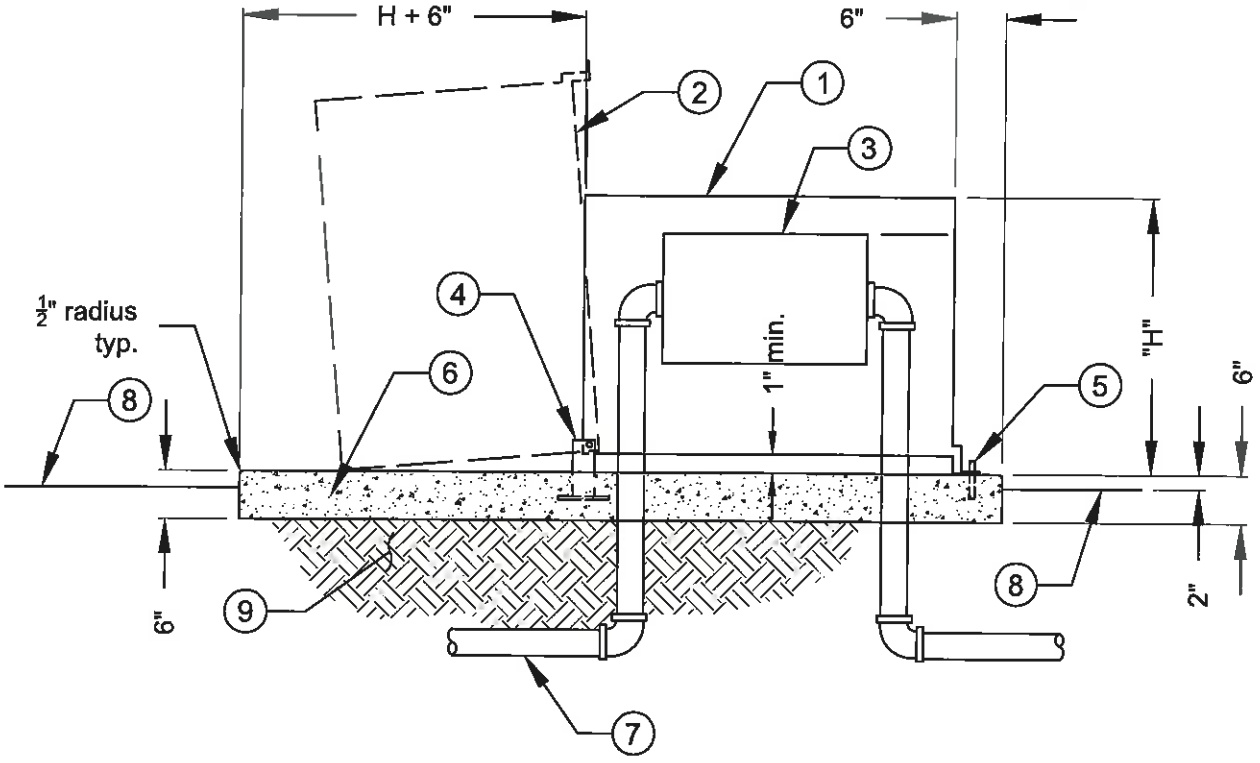
Notes:

1. Valves shall be FEBCO model no: 825Y -BV-S or 825YA-BV-S for $\frac{3}{4}$" -2" or 825YA for 2-$\frac{1}{2}$" or larger (install pipe supports per manufacturer's recommendations)
2. Freeze protection: All brass installed underground or in direct contact with concrete shall be covered with polar blanket or equivalent.
3. Backflow valve and piping shall match size of meter.
4. Bottom of valve to be 12" mimimum and 24" maximum above finish grade.
5. No connections of any kind is allowed between meter and backflow assembly.
6. A pressure regulator is to be installed when pressure is greater than or equal to 100 psi

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	REDUCED PRESSURE BACKFLOW PREVENTER	I-13
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

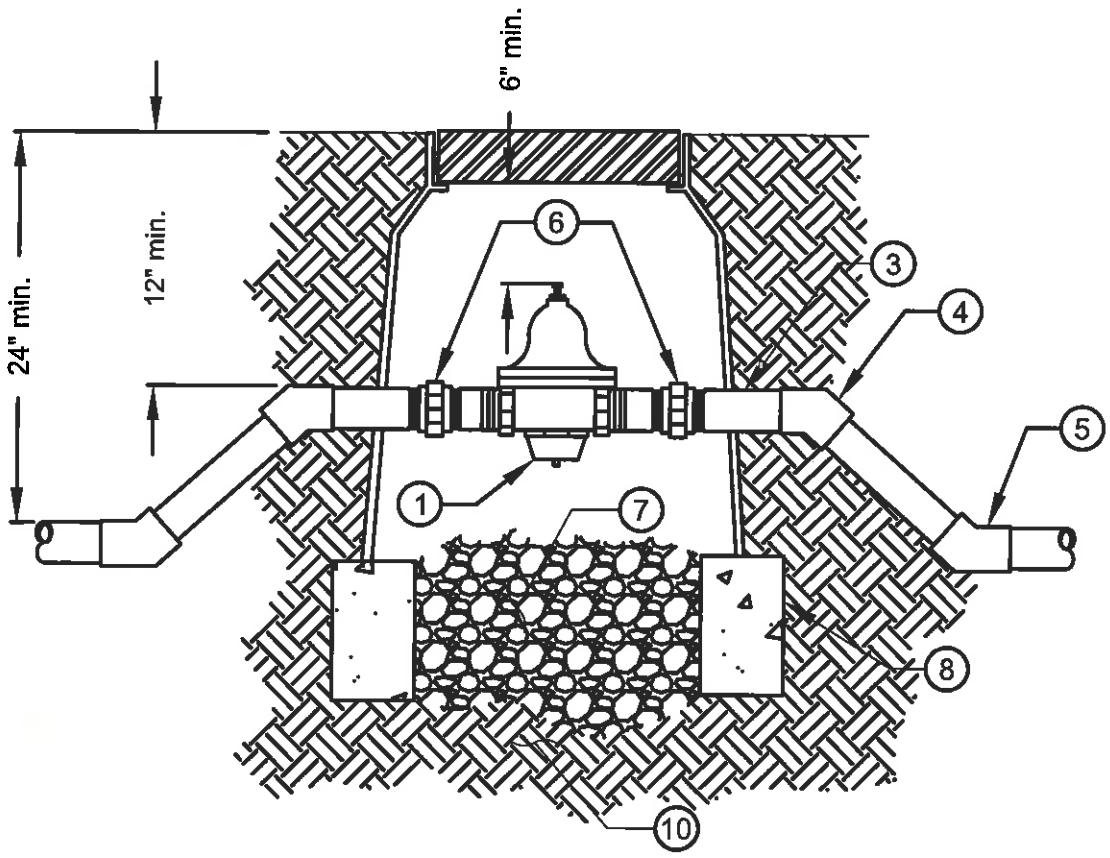


1. Backflow enclosure (closed position), color: solid 'stainless steel', center enclosure over backflow preventer, maintain 1" min. space @ base for drainage
2. Backflow enclosure (open position)
3. Backflow preventer (see detail)
4. Enclosure foot, anchor in concrete
5. U-bolt (stainless steel), anchor in concrete, provide lock & (2) keys
6. Concrete slab, 2800 psi @ 28 days (slope 2% min. for drainage)
7. Irrigation pressure pipe
8. Finish grade includes 3" of mulch
9. 90% compacted subgrade

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	BACKFLOW PREVENTER ENCLOSURE	I-14
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1



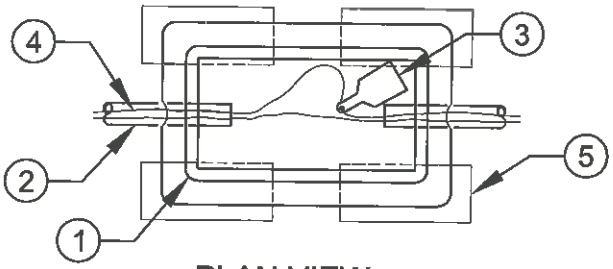
1. Pressure reduced brass valve
2. Plastic valve box with locking lid (10" dia. round). Hot brand lid "P R"
3. PVC sch 80 nipple- threaded on one end. Length as req'd to extend beyond box
4. PVC sch 80 coupling (45 degree)(typ.) to adjust mainline depth as req'd.
5. PVC mainline pipe (sch 40)
6. PVC sch 80 union
7. ¾" crushed rock or gravel (2 c.f. min.)
8. Common brick (three min. per box)
9. Finish grade includes 3" of mulch
10. 90% compacted subgrade (under box only)

Notes:

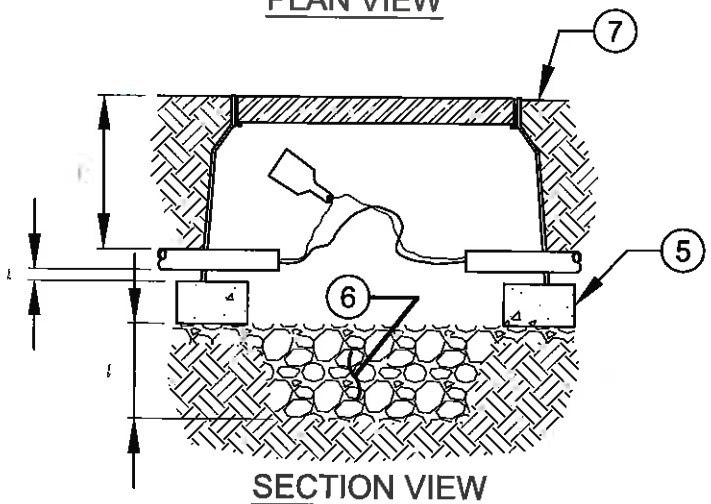
1. Provide thrust block at all 45 degree and 90 degree ells. Wrap pipe with 10 mil polyethylene tape when in direct contact with concrete.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	PRESSURE REGULATOR	I-15
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1



PLAN VIEW

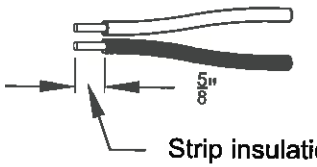


SECTION VIEW

1. Plastic box with locking lid (rectangular), mark lid "electrical", install flush to grade.
2. PVC sch. 40 conduit
3. Identification tag; secure to pull rope
4. Pull rope ($\frac{1}{4}$"Ø polypropylene); provide 12" slack (typical)
5. Common brick @ corners of box
6. $\frac{3}{4}$"Ø gravel
7. Finish grade includes 3" of mulch

INSTALLATION STEPS:

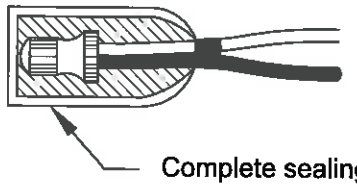
1. Strip insulation $\frac{5}{8}$" from ends



2. Twist wire nut until ends of wire reach bottom.

3. Mix contents of sealing bag per manufacturer. Cut $\frac{1}{2}$" off end of bag and insert wire nut to opposite end.

4. Wrap open end of selling bag with tape. Leave taped end in raised position until resin sets.



CONNECTOR FOR 110 VAC WIRES

(All splices to be approved by city prior to installation)

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

PULL BOX & CONNECTORS

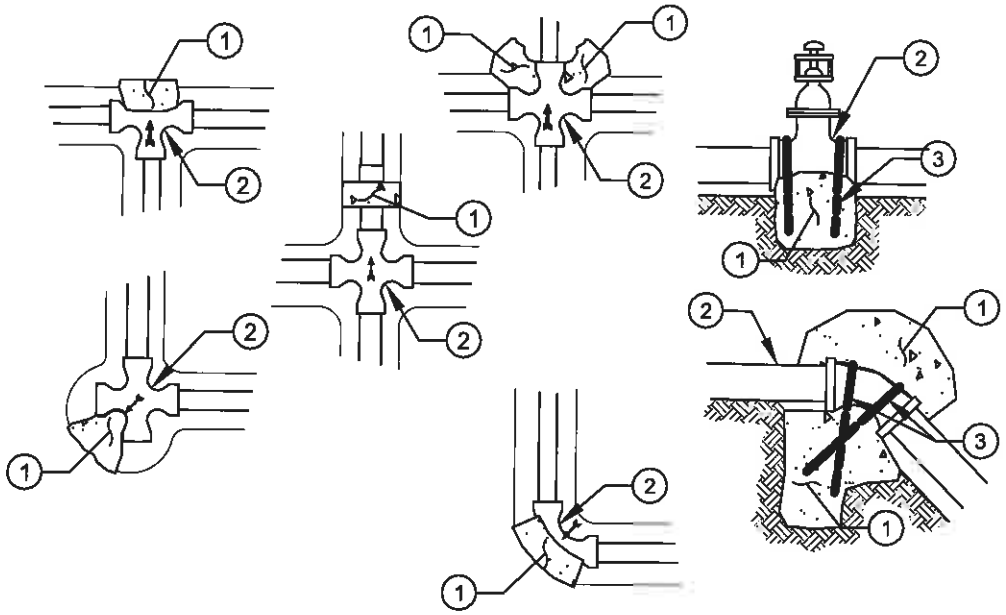
I-16

SHEET 1 OF 1

APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler

4/27/2016

NOT TO SCALE



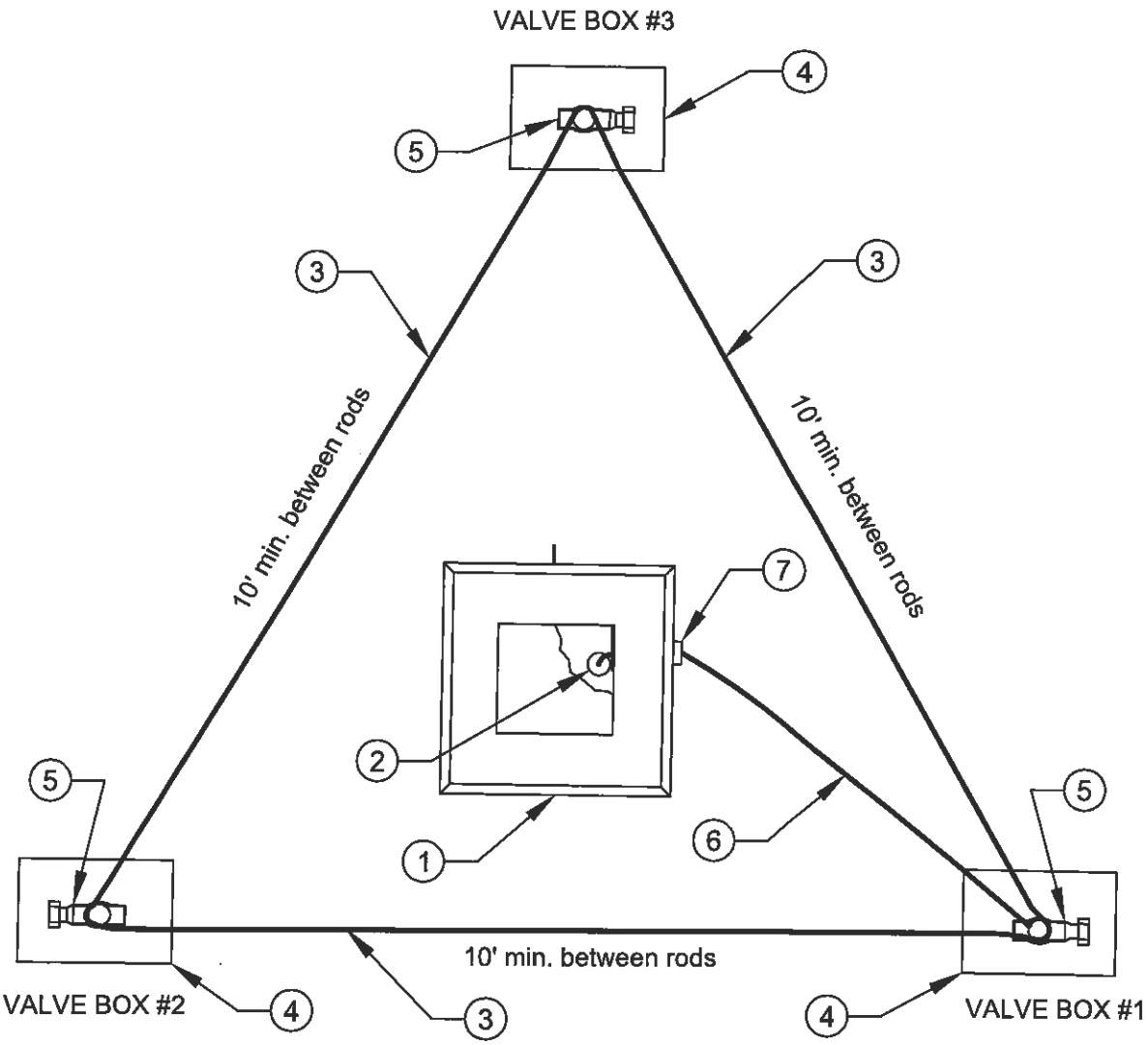
(1) Concrete (typ. 2000psi @ 28 days)

(2) Pipe or fittings (typ.)

(3) #5 rebar w/ 2" min. cover (typ.)

THRUST @ FITTINGS (in pounds @ 100 psi)					THRUST AT FITTINGS (in Pascals at 689 kPa)				
Pipe Size Inches	90° Bends	45° Bends	22-1/2° Bends	Dead Ends & Tees	Pipe Size (mm)	90° Bends	45° Bends	22-1/2° Bends	Dead Ends & Tees
1-1/2"	415	225	115	295	38.1	1848.8	1001.3	511.8	1312.8
2	645	350	180	455	50.8	2870.3	1557.5	801	2024.8
2-1/2	935	510	260	660	63.5	4160.8	2269.5	1157	3937
3	1,395	755	385	985	76.2	6207.8	3359.8	1713.3	4383.3
3-1/2	1,780	962	495	1,260	86.9	7921	4280.9	2202.8	5607
4	2,295	1,245	635	1,620	101.6	10212.8	5540.3	2815.8	7209
5	3,500	1,900	975	2,490	127	15575	8455	4338.8	11080.5
6	4,950	2,710	1,385	3,550	152.4	22027.5	12059.5	6163.3	15979.5
8	8,300	4,500	2,290	5,860	203.2	36935	20025	10190.5	26077
10	12,800	6,900	3,540	9,050	254	56960	30705	15753	40272.5
12	18,100	9,800	5,000	12,800	304.8	80545	43610	22250	56960

EXAMPLE: A pressure of 150 psi (1933.5 kpa) on a 4-inch (101.6mm) tee. AWWA Table 1008.1.4(a) indicates 1,620 pounds (7209 n) for 100 psi (689 kpa). Therefore, total thrust for 150 psi (10335 kpa) will equal 1-1/2 times 1,620 pounds (7209 n) for a total thrust of 2,430 pounds (10810 n). To determine the bearing area of thrust blocks, refer to AWWA table 1008.1.4(b) for the safe bearing load of the soil and divide the total thrust by the safe bearing load.

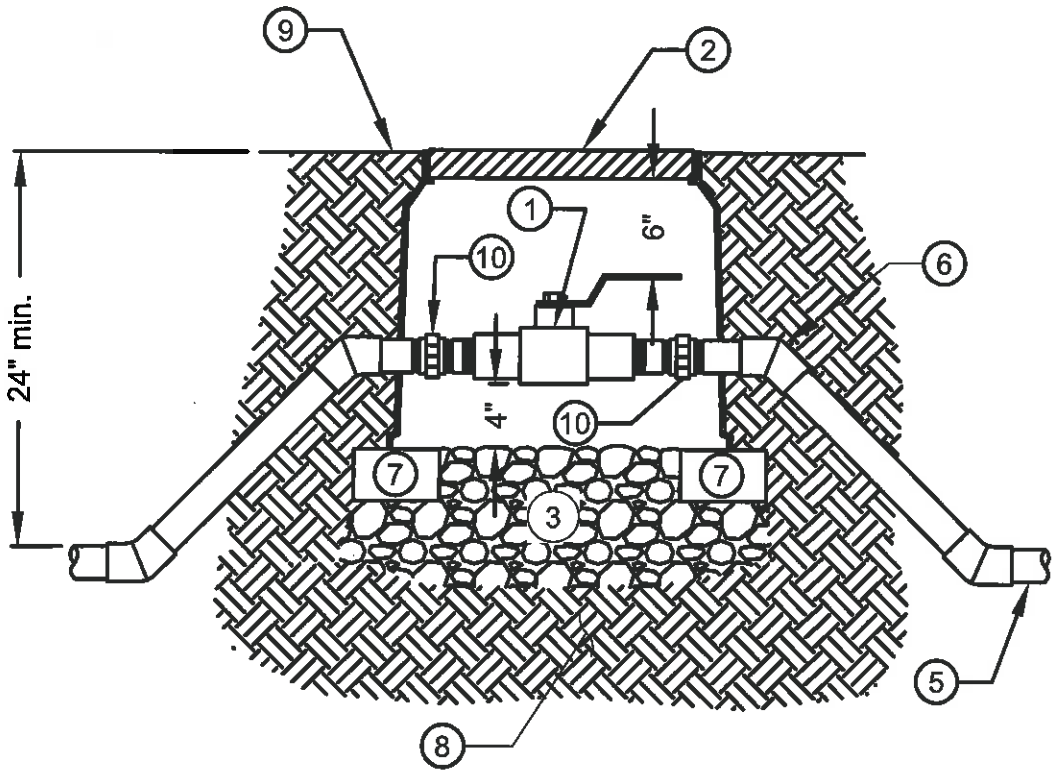


1. Satellite or WS-PRO
2. #10 bare copper wire from grounding terminal lug
3. #10 bare copper wire from valve box held in place with brass clamp (see detail for "grounding wires in grid')
4. Standard valve box with cover (1 of 3)
5. Grounding rod from GK-UL3ROD three rod kit
6. #10 bare copper wire fed through conduit from satellite to grounding rod
7. Conduit from satellite

Note:
Plan view for layout only. See grounding rod notes for installation instructions.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	TRIANGULAR GRID PLAN VIEW DETAIL	I-18
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 OF 1

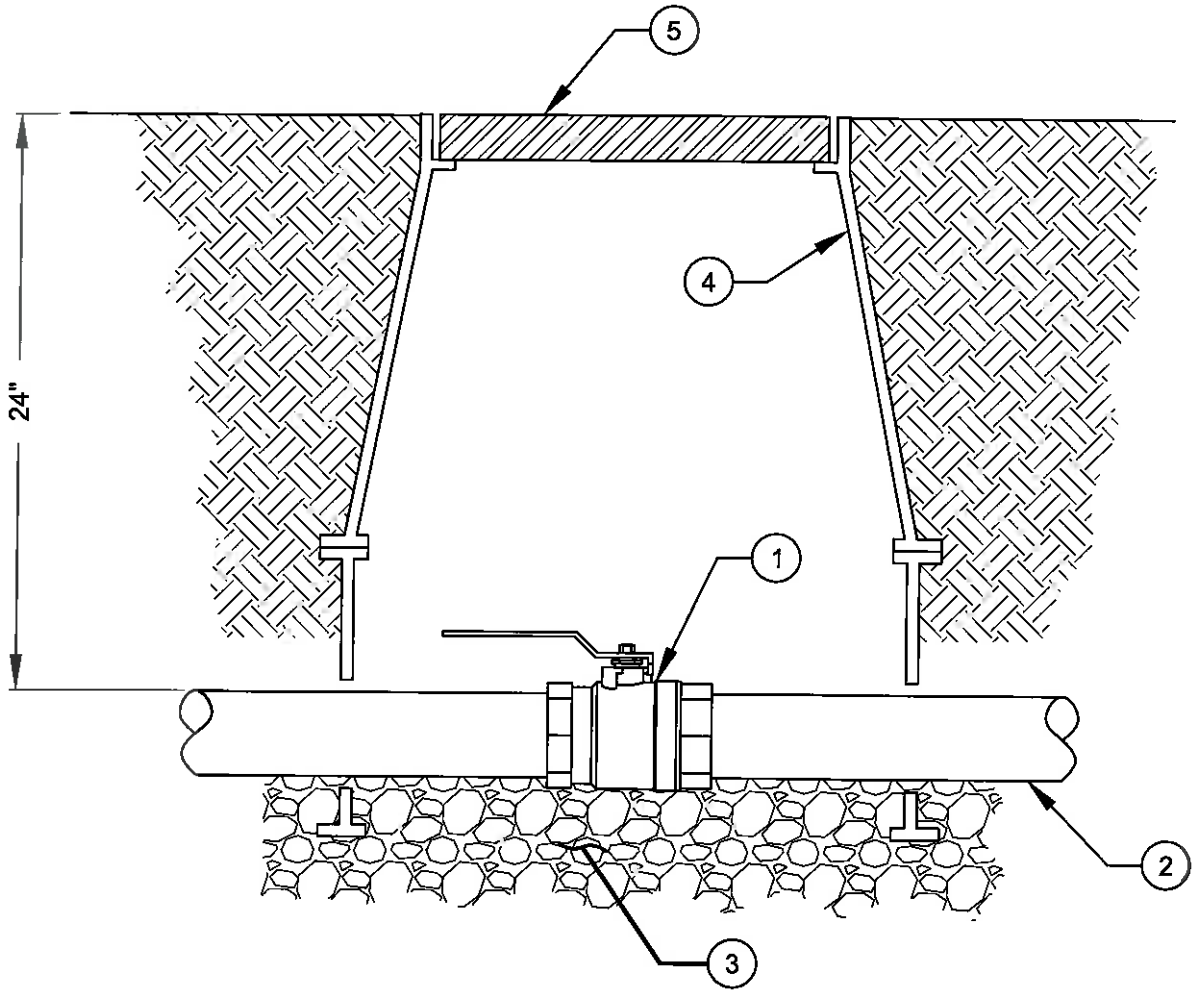


1. Ball valve up to 3" (line-size)
2. Valve box with locking cover (NDS #1100 or equal) installed flush with finish grade. Hot brand mark lid "BV".
3. 3/4" pea gravel (one c.f. min.)
4. 5 PVC mainline
5. PVC sch 80 45° (typ. of 4) slip
6. Common brick (min. 3 per box), set on undisturbed soil.
7. 90% compacted sub grade (under box only)
8. Finish grade includes 3" of mulch
9. Sch. 80 union - two (2)

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	BALL VALVE	I-19
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 2

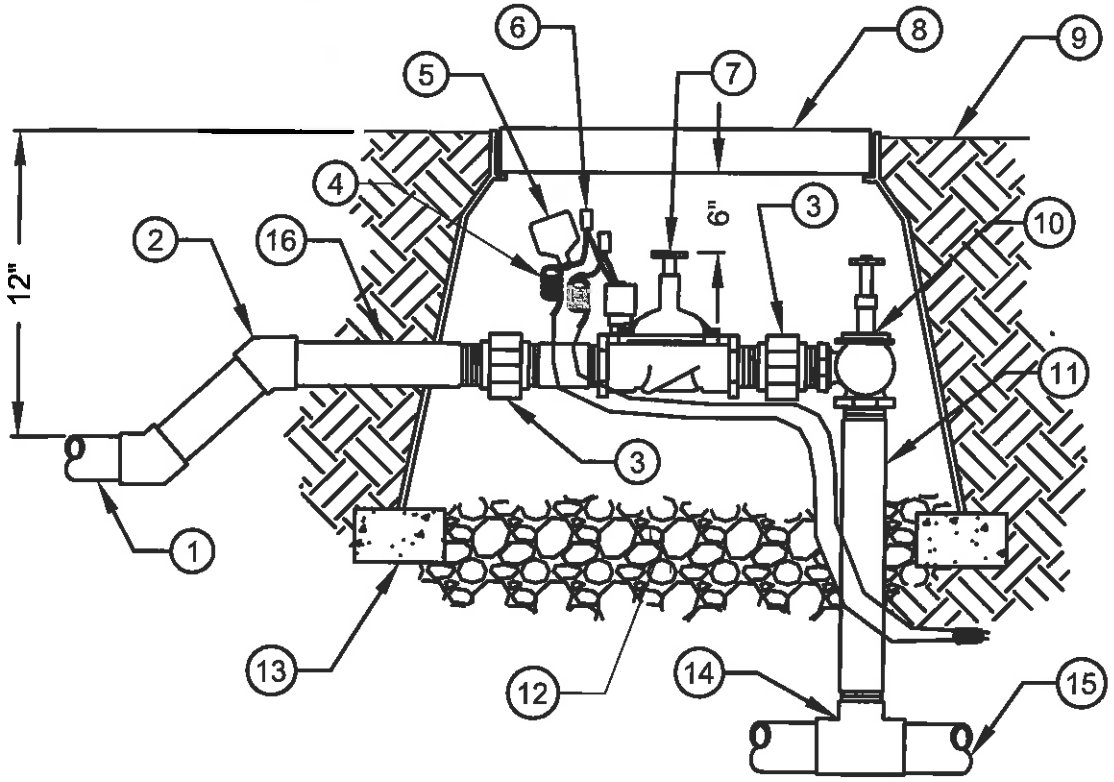


1. Brass ball valve up to 3"
2. PVC irrigation main 3" or smaller
3. $\frac{3}{4}$" pea gravel (two c.f.min.)
4. Retangular irrigation valve box
5. Hot brand mark box lid "VALVE"
6. Finish grade includes 3" of mulch

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	BRASS BALL VALVE (3" MAX.)	I-19
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 2 0F 2



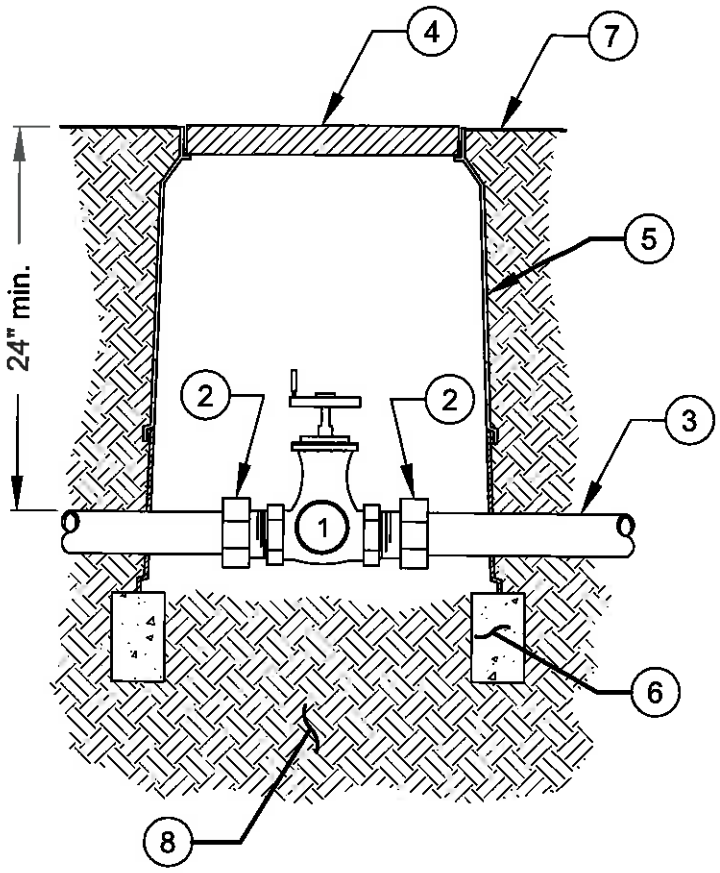
1. PVC sch 40 lateral pipe
2. PVC sch 80 coupling (45°) slip to angle pipe to lateral depth (typical)
3. Sch 80 union
4. Extra wire coils - 6 to 8 wraps over 1" pipe. Install a total of 3 wires for every valve to have a spare wire.
5. Valve id tag
6. Waterproof connector (24v)
7. Remote control valve
8. Valve box with locking lid (rectangular). Install flush with grade, mark lid "RCV"
9. Finish grade includes 3" of mulch
10. Brass angle valve with cross handle or ball valve
11. PVC sch 80 riser pipe length varies
12. ¾"Ø gravel (2 c.f min.)
13. Common brick (typical @ corner)
14. Sch. 80 Tee
15. PVC mainline pipe
16. PVC sch. 80 nipple (typ)

Notes:

1. Flush all pipe lines prior to installing valve
2. Wrap all threads with teflon tape (2 wraps maximum.)
3. Compact soils around valve box to 90% of original dry density
4. Install heads-up marking flag on valve box lid. Contractor to maintain marking flag locations until project is complete.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	BUBBLER REMOTE CONTROL VALVE	I-20
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1

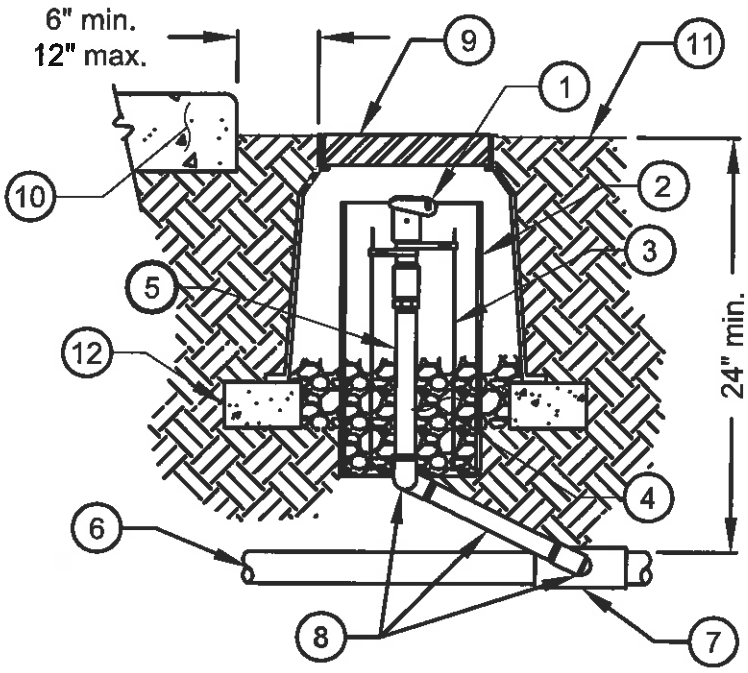


1. Brass gate valve (line - size) non-rising stem by nibco or City approved equal. All valves 3" or larger shall be flanged.
2. PVC sch. 80 nipples and sch. 80 unions
3. PVC mainline 3" or smaller (mainline larger than 4" dia. shall be class 200 ring-tite).
4. Valve box with locking cover (NDS #1100 or equal) mark lid "G V"" install flush to grade.
5. Valve box extension (length as req'd), extension box shall not rest on pipe.
6. Common brick (min. three per box), set on undisturbed soil.
7. Finish grade includes 3" of mulch.
8. 90% compacted sub-grade

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT

LANDSCAPING STANDARD DETAILS

4/27/2016	GATE VALVE (3" OR SMALLER)	I-21
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1



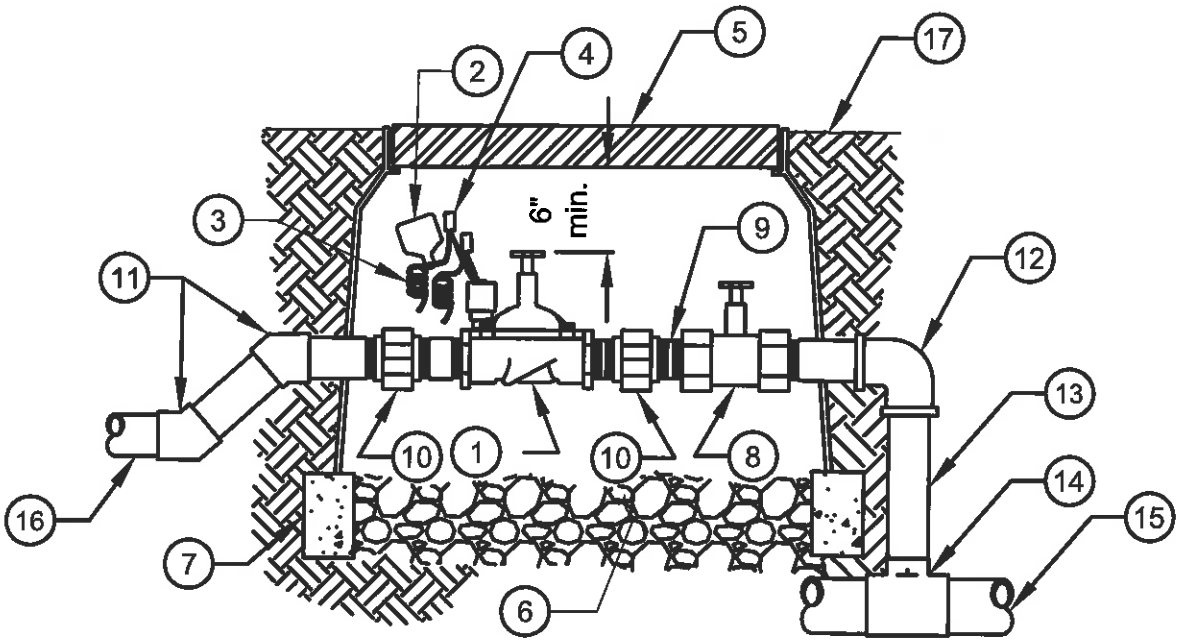
1. Quick-coupling valve (bronze two piece with 1"- inch inlet and locking rubber cover).
2. 8" dia. pipe sleeve, keep sleeve from bearing on riser or pipe.
3. (2) 5/8" x 18" rebar with (2) stainless steel pipe clamps
4. 3/4" to 1" dia. gravel (12" deep)
5. PVC sch 80 brass nipple
6. PVC mainline pipe
7. S x S x T tee or S x T ell (pvc sch. 80)
8. Fabricate with:
   (3) street ell
   (1) 12" L. nipple
9. 10" round valve box with locking lid install flush to finsh grade. Hot brand lid "Q C".
10. Walk curb, paving or other improvement
11. Finish grade includes 3" of mulch
12. Common brick (typical of 3 per box)

Notes:

1. All threaded fittings shall be wrapped with teflon tape (2 wraps min.)
2. Flush pipes prior to installing quick coupling valve on swing joint.
3. Install heads-up marking flag on valve box lid. Contractor to maintain marking until project is complete
4. Furnish fittings and piping nominally sized identical to nominal quick coupling valve inlet size.
5. Compact soils around valve box to 80% of original dry density.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	QUICK-COUPLING VALVE	I-22
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1



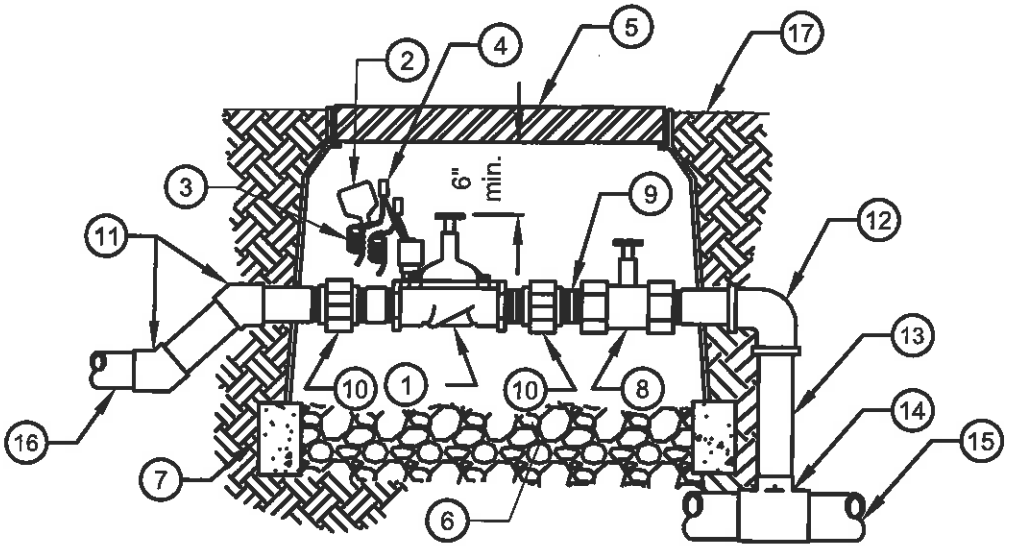
1. Remote control valve
2. Valve id tag
3. Extra wire coils - 6 to 8 wraps over 1" pipe. Install a total of 3 wires for every valve to have a spare wire.
4. Waterproof connector (24v)
5. Valve box w/ locking lid (rectangular), install flush with grade. Hot brand lid "RCV" and with valve number.
6. 3/4"Ø gravel (2 c.f. min.)
7. Common brick (one per corner of box)
8. Brass ball valve (line-size) or brass angle valve (angle valve replaces const. note 12) Angle valve to be located within box.
9. PVC sch 80 nipple (typ.)
10. PVC sch 80 union
11. PVC sch 80 SS coupling (45°) to angle pipe to lateral depth (typical)
12. PVC sch 80 ell (for ball valve)
13. PVC sch 80 riser pipe length varies
14. SSS Tee
15. PVC mainline pipe
16. PVC sch 40 lateral pipe
17. Finish grade includes 3" of mulch

Notes:

1. Flush all pipe lines prior to installing valve
2. Wrap all threads with teflon tape (2 wraps maximum.)
3. Compact soils around valve box to 90% of original dry density
4. Install heads-up marking flag on valve box lid. Contractor to maintain marking flag locations until project is complete.
5. Install (4) 1-5/8 inch long dry wall screws; each corner of the lid to the box.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	REMOTE CONTROL VALVE	I-23
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1



1. Remote control valve
2. Valve id tag
3. Extra wire coils - 6 to 8 wraps over 1" pipe
4. Waterproof connector (24v)
5. Valve box w/ locking lid (rectangular), install flush with grade. Hot brand lid "RCV" and with valve number.
6. 3/4"Ø gravel (2 c.f. min.)
7. Common brick (one per corner of box)
8. Brass ball valve (line-size) or brass angle valve (angle valve replaces const. note 12) Angle valve to be located within box.
9. PVC sch 80 nipple (typ.)
10. PVC sch 80 union
11. PVC sch 80 SS coupling (45°) to angle pipe to lateral depth (typical)
12. PVC sch 80 ell (for ball valve)
13. PVC sch 80 riser pipe length varies
14. SSS Tee
15. PVC mainline pipe
16. PVC sch 40 lateral pipe
17. Finish grade includes 3" of mulch

Notes:

1. Flush all pipe lines prior to installing valve
2. Wrap all threads with teflon tape (2 wraps maximum.)
3. Compact soils around valve box to 90% of original dry density
4. Install heads-up marking flag on valve box lid. Contractor to maintain marking flag locations until project is complete.
5. Install (4) 1-5/8 inch long dry wall screws; each corner of the lid to the box.

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

4/27/2016	MASTER CONTROL VALVE	I-24
NOT TO SCALE	APPROVED BY: BRIAN GENGLER, CITY ENGINEER Brian Gengler	SHEET 1 0F 1